

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

NICARAGUA

PUEBLA-PANAMA PLAN HIGHWAY PROJECT TO PROMOTE COMPETITIVENESS

(NI-0170)

LOAN PROPOSAL

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CONTENTS

MAP

EXECUTIVE SUMMARY

I.	FRAME OF REFERENCE	1
A.	Socioeconomic context	1
B.	The sector	3
C.	The country's strategy in the sector.....	4
1.	The Highway Program to Promote Competitiveness (HPPC).....	5
2.	Financing of the HPPC.....	5
D.	The Bank's strategy and experience in the sector	8
1.	Comparative figures	8
2.	The Bank's experience with investment in the sector	9
3.	The Bank's experience with maintenance.....	10
4.	Strategy	11
E.	The experience of other financing agencies	11
F.	Financial status of the highway sector.....	12
G.	Strategic framework of the project	13
II.	THE PROJECT	15
A.	Strategy	15
B.	Objectives and description.....	15
1.	Type of operation and cost categories.....	16
2.	Components financed by the NDF	16
3.	Components financed by the Bank	16
4.	Components financed with local counterpart resources	17
C.	Costs and financing.....	17
III.	EXECUTION OF THE PROJECT	20
A.	Borrower and executing agency.....	20
B.	Execution and administration.....	20
C.	Selection criteria for network investments and maintenance activities	21
D.	Procurement of goods and services	21
E.	Coordination of projects under the Highway Program to Promote Competitiveness	21
F.	Schedule, monitoring, auditing and evaluation.....	22
G.	Ex post evaluation	24
H.	Public communications system.....	25

I. Revolving fund	25
J. Disbursement schedule and period	25
K. Environmental and social aspects.....	26
IV. FEASIBILITY AND RISKS	30
A. Technical and institutional feasibility.....	30
B. Financial feasibility.....	32
C. Social and environmental feasibility	33
D. Economic feasibility	34
E. Poverty-targeting and equity classification.....	34
F. Benefits and impact	35
G. Risks.....	36

ANNEXES

Annex I	Logical framework
Annex II	Procurement and tender schedule

BASIC SOCIOECONOMIC DATA

For basic socioeconomic data on Nicaragua, please refer to the following address:

[HTTP://WWW.IADB.ORG/REG/INDEX.CFM?FUSEACTION=EXTERNALLINKS.COUNTRYDATA](http://www.iadb.org/reg/index.cfm?fuseaction=externallinks.countrydata)

INFORMATION AVAILABLE IN THE RE2/FI2 TECHNICAL FILES

Preparation:

- * Request for the operation submitted to the IDB by the Government of Nicaragua, 23 July 2003
- * Request from the Government of Nicaragua to the Nordic Development Fund, 10 October 2003
- * Propuesta del Plan Nacional de Desarrollo [Proposed National Development Plan], Government of Nicaragua, September 2003
- * Estudio del Plan Nacional de Transporte de Nicaragua [Study of Nicaragua's National Transportation Plan], Ministry of Transport and Infrastructure of Nicaragua, February 2001
- * Programa Vial para la Competitividad [Highway Program to Promote Competitiveness], Task Force, Ministry of Transport and Infrastructure/Highway Maintenance Fund, November 2003:

Document 1 - Diagnóstico del Programa [Baseline Study]

Document 2 - Informe Preliminar de Ingeniería [Preliminary Engineering]: Zone I

Document 3-Informe Preliminar de Ingeniería: Zone II

Document 4-Informe Preliminar de Ingeniería: Zone III

Document 5-Informe Preliminar de Ingeniería: Zone IV

Document 6-Informe de la Red a Mantener [Maintenance Report]: Zones I to IV

Document 7-Informe Final de Ingeniería: Zona del Proyecto [Final Engineering Report: Project Area]

Documents 8 to 18-Informe Final de Ingeniería: Componentes del Proyecto [Final Engineering Report: Project Components]

Document 19-Análisis de Costos y Precios Unitarios del Proyecto [Analysis of Costs and Unit Prices under the Project]

Document 20-Documento de Licitación [Bid Document]

- * Análisis Económico de las Inversiones Viales en el Proyecto [Economic Analysis of Highway Investment under the Project], Roughton Int'l., Nicaragua, October 2003
- * Manual Centroamericano de Normas Ambientales para el Diseño, Construcción y Mantenimiento de Carreteras [Central American Manual of Environmental Standards for the Design, Construction and Maintenance of Highways], SIECA, November 2002
- * Manual Guía para la Elaboración de Estudios de Impacto Ambiental en Proyectos de Infraestructura Vial [Guide for the Preparation of Environmental Impact Assessments of Highway Infrastructure Projects, Ministry of Transport and Infrastructure, December 2001
- * Informe de la Evaluación Social y Ambiental del Proyecto Vial del PPP para la Competitividad [Report on Environmental and Social Assessment of the PPP Highway Project, November 2003
- * Letter from the Minister of Finance and Public Credit with commitment of resources for execution of the project, 1 December 2003

Execution:

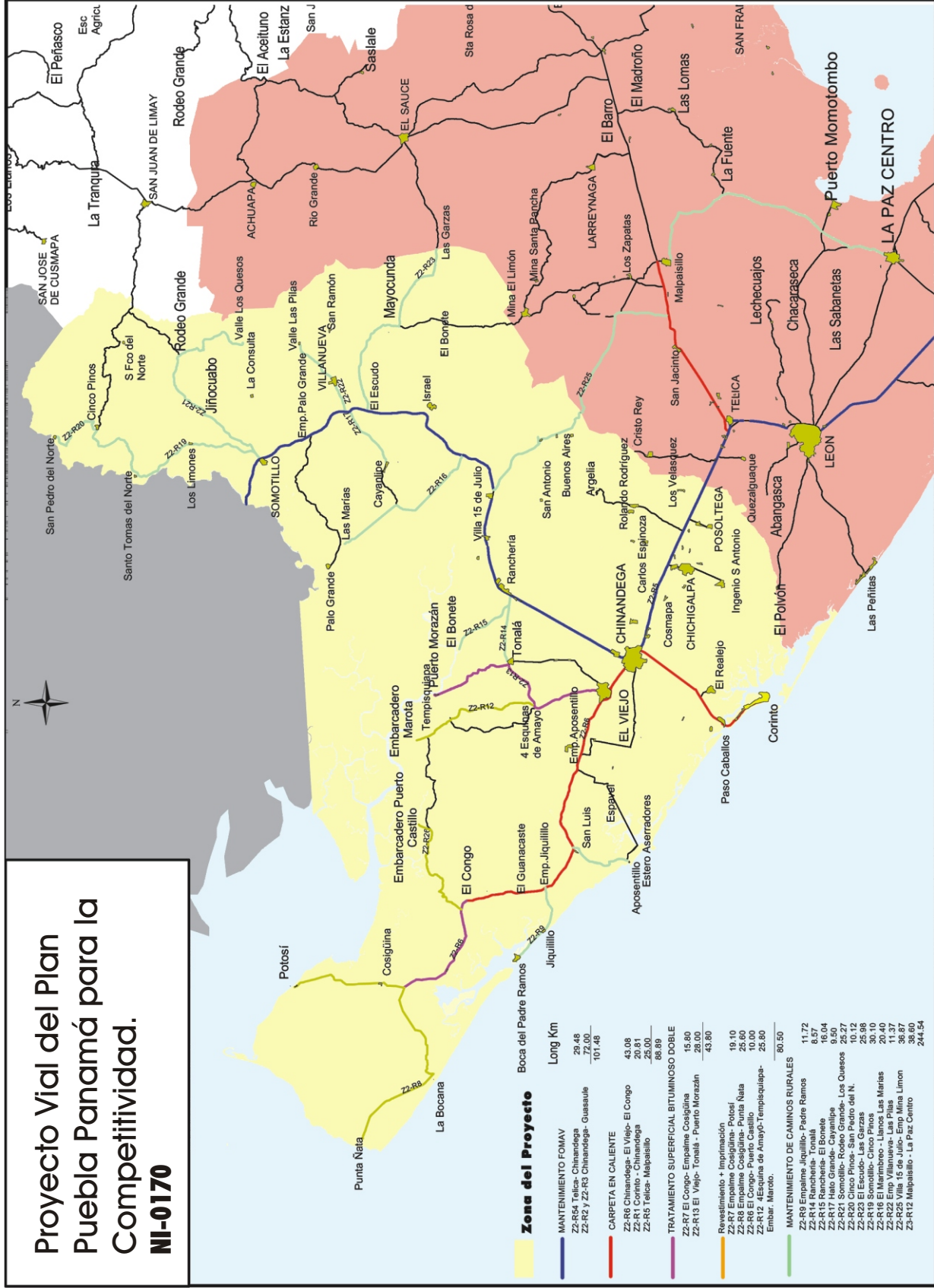
- * Summary of the Economic Analysis
- * Summary of the Institutional Analysis
- * Summary of the Social and Environmental Analysis
- * Summary on Measuring Project Effectiveness

ABBREVIATIONS

CABEI	Central American Bank for Economic Integration
CESI	Committee on Environmental and Social Impact
DANIDA	Danish Agency for Development Assistance
DGV	Dirección General de Vialidad [Highway Directorate]
ESE	Environmental and Social Evaluation
ESISs	Environmental and Social Impact Studies
ESMP	Environmental and Social Management Plan
FOMAV	Fondo de Mantenimiento Vial [Highway Maintenance Fund]
GNI	Government of Nicaragua
HDM	Highway Design and Maintenance Model
HIPC	Heavily Indebted Poor Countries
HPPC	Highway Program to Promote Competitiveness
IDA	International Development Association
IRR	Internal rate of return
MARENA	Ministry of Environment and Natural Resources
MTI	Ministry of Transport and Infrastructure
NDF	Nordic Development Fund
PMAS	Plan de Manejo Ambiental y Social [Environmental and Social Management Plan]
PND	Plan Nacional de Desarrollo [National Development Plan]
PPP	Puebla-Panama Plan
RICAM	Red Internacional de Carreteras Mesoamericanas [International Mesoamerican Road Network]
SIECA	Secretaría de Integración Económica Centroamericana [Permanent Secretariat of the General Treaty on Central American Economic Integration]

NICARAGUA

Proyecto Vial del Plan Puebla Panamá para la Competitividad. NI-0170



Este mapa, preparado por el Banco Interamericano de Desarrollo, no ha sido autorizado por ningún órgano competente y su inclusión en el documento de préstamo tiene por objeto exclusivo indicar el área de influencia del Proyecto que se propone financiar.



Inter-American Development Bank
Regional Operations Support Office
Operational Information Unit

Nicaragua

Tentative Lending Program

2004

Project Number	Project Name	IDB US\$ Millions	Status
NI0171	Basic Education for the Young and the Adults	10.0	
NI0170	PPP Road Program for Competitiveness	40.0	
NI0180	VIII population and IV housing census	6.6	
NI0181	Institutional Support to the Coordination and Strategy Secretariat	6.0	
NI0168	Citizenship Security Prog.	7.0	
NI0183	Social Reform Program II	15.0	
NI1001	Health Program II	30.0	
*NI1002	Enitel Investment Program	34.8	
Total - A : 8 Projects		149.4	
NI1004	Family Ministry Strengthening	3.0	
NI0174	National Program for Competitiveness	7.5	
NI0113	Multiphase Program Secondary Roads	40.0	
Total - B : 3 Projects		50.5	
TOTAL 2004 : 11 Projects		199.9	

2005

Project Number	Project Name	IDB US\$ Millions	Status
NI0110	Education II	25.0	
NI0152	Masaya Basin and Municipality Env Prog	10.0	
NI0155	Integral Attention to poor neighborhoods	20.0	
NI0177	Administrative Probity and Anti-Corruption Plan	15.0	
Total - A : 4 Projects		70.0	
TOTAL - 2005 : 4 Projects		70.0	
Total Private Sector 2004 - 2005		34.8	
Total Regular Program 2004 - 2005		235.1	

*** Private Sector Project**



NICARAGUA

IDB LOANS

APPROVED AS OF NOVEMBER 1, 2003

	US\$Thousand	Percent
TOTAL APPROVED	2,070,925	
DISBURSED	1,607,406	77.61 %
UNDISBURSED BALANCE	463,519	22.38 %
CANCELATIONS	41,909	2.02 %
PRINCIPAL COLLECTED	340,192	16.42 %
APPROVED BY FUND		
ORDINARY CAPITAL	272,172	13.14 %
FUND FOR SPECIAL OPERATIONS	1,727,887	83.43 %
OTHER FUNDS	70,866	3.42 %
OUTSTANDING DEBT BALANCE	1,267,214	
ORDINARY CAPITAL	146,112	11.53 %
FUND FOR SPECIAL OPERATIONS	1,116,887	88.13 %
OTHER FUNDS	4,215	0.33 %
APPROVED BY SECTOR		
AGRICULTURE AND FISHERY	374,270	18.07 %
INDUSTRY, TOURISM, SCIENCE AND TECHNOLOGY	104,275	5.03 %
ENERGY	211,233	10.19 %
TRANSPORTATION AND COMMUNICATIONS	271,432	13.10 %
EDUCATION	22,397	1.08 %
HEALTH AND SANITATION	178,478	8.61 %
ENVIRONMENT	65,304	3.15 %
URBAN DEVELOPMENT	57,014	2.75 %
SOCIAL INVESTMENT AND MICROENTERPRISE	288,514	13.93 %
REFORM AND PUBLIC SECTOR MODERNIZATION	466,706	22.53 %
EXPORT FINANCING	1,826	0.08 %
PREINVESTMENT AND OTHER	29,476	1.42 %

* Net of cancellations with monetary adjustments and export financing loan collections.



NICARAGUA

STATUS OF LOANS IN EXECUTION AS OF NOVEMBER 1, 2003

(Amount in US\$ thousands)

APPROVAL PERIOD	NUMBER OF PROYECTS	AMOUNT APPROVED*	AMOUNT DISBURSED	% DISBURSED
<u>REGULAR PROGRAM</u>				
Before 1998	2	55,000	45,076	81.96 %
1998 - 1999	8	188,175	117,773	62.59 %
2000 - 2001	17	306,705	78,641	25.64 %
2002 - 2003	7	172,900	25,181	14.56 %
TOTAL	34	\$722,780	\$266,671	36.90 %

* Net of cancellations. Excludes export financing loans.

PUEBLA-PANAMA PLAN HIGHWAY PROJECT TO PROMOTE COMPETITIVENESS

(NI-0170)

EXECUTIVE SUMMARY

Borrower:	Republic of Nicaragua	
Executing agency:	Ministry of Transport and Infrastructure (MTI), with the participation of the Fondo de Mantenimiento Vial [Highway Maintenance Fund] (FOMAV)	
Amount and source:	IDB (FSO):	US\$40.0 million
	Cofinancing (NDF):	US\$13.6 million
	Local:	US\$11.9 million
	Total:	US\$65.5 million
Financial terms and conditions:	Amortization period:	40 years
	Grace period:	10 years
	Disbursements:	Minimum 3 years
		Maximum 4.5 years
	Interest rate:	1% during grace period
		2% for the following 30 years
	Inspection and supervision:	1%
	Credit fee:	0.5%
	Currency:	U.S. dollar or equivalent in other currencies, except for that of Nicaragua
Objectives:	<p>The overall objective of the project is to provide infrastructure services to upgrade the capacity, quality and interconnectivity of the highway network in the country's northwestern zone, thereby promoting competitiveness and investment in the zone on a sustainable basis. A major portion of the highway system in the project area has been assigned high priority under the Puebla-Panama Plan (PPP). This project, while justifiable and executable in its own right, forms part of the broader Highway Program to Promote Competitiveness (HPPC), which covers all four zones of the country. The specific objectives of the project are to: (i) reduce transportation and freight costs; (ii) reduce travel times; (iii) increase maintained and maintainable highway network relevant to the project objectives; (iv) increase the percentage of all-weather roadways in the relevant network; and (v) allocate resources for maintenance activities on all maintainable highways throughout the country.</p>	

Description: The project will fund investments in the road system and specific maintenance works, with financing for the following activities: (i) improvement of approximately 90 km of paved highways; (ii) upgrading and resurfacing of approximately 70 km of dirt roads or originally surfaced roads; (iii) periodic maintenance, including localized improvements to approximately 290 km of surfaced roads; (iv) routine maintenance of maintainable highways in the project area; (v) supervision of civil works and maintenance, preinvestment studies and institutional strengthening for the MTI and FOMAV. The investment and maintenance activities under the project have been divided into two stages, with stage two scheduled to begin only after the government has arranged permanent resources for providing maintenance on the country's maintainable highway network.

Environmental and social review: The Ministry of the Environment and Natural Resources (MARENA) and the Committee on Environment and Social Impact (CESI) have determined that, given the nature of its proposed highway investment and maintenance activities, the project does not require environmental impact assessments (EIAs). An environmental and social evaluation (ESE) was carried out however. The project does not include construction of new highways, but rather seeks to improve existing roads and highways while at the same time reducing damage caused by lack of maintenance. During preparation of the project: (a) existing environmental and social studies were reviewed and additional ones were carried out; (b) potential effects (both direct and indirect) were identified and classified; (c) specific mitigation measures were devised and cost estimates calculated; and (d) plans were drawn up for management, supervision and implementation of the environmental and social measures necessary for suitable execution of the project. The MTI's institutional strengthening needs in the environmental area were also evaluated and a plan prepared, which is included in the summary of the institutional analysis (information in the files—Execution). The project meets the environmental standards and principles for protection of nature reserves, forests, parks and other environmentally fragile areas, and for safeguarding the nation's cultural heritage and the beneficiary communities. The environmental and social efforts undertaken for the project have laid the foundation for determining the scope and requirements to be applied in other zones and projects under the HPPC. Lastly, a promotional and media campaign (paragraph 3.18) to promote and raise awareness of the social and environmental aspects of the project has been prepared and launched in the project area, and the final touches are being given to a separate Web page containing all relevant information on the project, in addition to that offered by the Bank's Public Information Center and the MTI/FOMAV.

The Bank's country and sector strategy:

The Bank's strategy with Nicaragua (document GN-2230-1) stresses economic growth and focuses on boosting competitiveness and production as the primary objective and essential prerequisite for reducing poverty. It also underscores the importance of improving basic infrastructure services, seeking areas of common interest and creating new synergies through coordination of efforts among bilateral and multilateral institutions. This project—together with the HPPC of which it is part—is entirely consistent with this strategy inasmuch as it coordinates institutional and financial efforts to upgrade and maintain the highway system that is relevant to achieving greater competitiveness and increased production.

Coordination with other international financial institutions:

Through discussions between the public and private sectors, Nicaragua has identified the zones in which the investment of public funds in the country's infrastructure can have the greatest impact, particularly on the country's integrated highway system. Following this approach and bearing in mind the integration priorities under the PPP, the authorities drew up a program for the period 2004-2006 and presented it to the international community at the very start (paragraph 1.16), during preparation, and again on 26-27 October 2003 when it was submitted to the Consultative Group (paragraph 1.21). The project team has provided support for preparation of the program and the Country Office in Nicaragua has participated actively in the dialogue to keep everyone informed and ensure coordination of the different bilateral and multilateral agencies.

Benefits:

The immediate benefits will involve savings in direct costs associated with the transporting of goods and persons over the road network through improved interconnectivity, quality and sustainability of highway infrastructure, including all-weather roadways. Maintenance of both the currently maintainable highway system, and others upgraded to maintainable by the works funded under the project, will help preserve and extend the useful life of the country's capital stock in infrastructure, eliminate lack of highway infrastructure as an obstacle to competitiveness and investment, and facilitate the identification of additional investments in other sectors of activity. Other benefits will result from bringing various highway loan projects together under a single, closely coordinated and integrated program (instead of concentrating on isolated stretches of the highway system), and from a more effective maintenance program to be carried out as a real local counterpart to the investments, ensuring more efficient use of the loan resources allocated to the highway sector. Strengthening will be provided to assist the MTI and FOMAV in managing highway investments and maintenance works, respectively, so that these two institutions are better able to oversee the works assigned in their separate areas of responsibility and jurisdiction over the road system.

Successful initiation of the second stage in the execution of the investment and maintenance components of the project is also expected to spur government efforts to allocate permanent resources to FOMAV, enabling the Fund to carry out its legal mandate on a sustainable basis. Moreover, the beneficiary population will have improved access to markets, employment centers and social services in general. In the medium term, major benefits are expected as a result of the project's positive impact on production, productivity, investment, and employment

Risks:

The main risks in this operation relate to: (a) allocation and timely transfer of the local counterpart resources required for execution of the project; and (b) allocation of funding for a permanent highway maintenance program covering the country's entire network of roads, to be administered by FOMAV. If the local counterpart funds are not allocated or, once approved, if they are not transferred according to the proposed implementation schedule, then the project will not be completed as planned. To reduce this risk, the project team has: (i) obtained confirmation from the authorities of the Ministry of Finance and Public Credit, the Coordination and Strategy Secretariat under the Office of the President, and the International Monetary Fund's representative in Managua and staff in Washington, D.C., to the effect that given the nature of the concessional resources to be granted by the Bank and the NDF, there are no fiscal restrictions preventing timely allocation and transfer of these resources; (ii) confirmed that the recently (September 2003) published National Development Plan (PND) includes the project's highway investment components, and that the project continues to be of high priority to the government as indicated in the request from the Bank's Governor for Nicaragua (information in the files—Preparation), reiterated in the meeting of the Consultative Group in Managua on 26-27 October 2003, and ratified in the course of the Programming Mission on 29 October 2003; (iii) ascertained that the proforma budget for 2004 forwarded to the Legislative Assembly for approval includes the resources required to begin execution of the project's year one activities; and (iv) received a written communication from the Minister of Finance and Public Credit reiterating the commitment to provide the counterpart resources needed for execution of the project in 2004 according to the implementation schedule (information in the files—Preparation). With respect to the resources required in order for FOMAV to fulfill its responsibility of ensuring maintenance of the highway network, the authorities of the borrower and of the MTI and FOMAV are taking the necessary action to arrange for the financial independence of the latter and thus ensure that it is able to carry out its mandate, including steps to: (i) amend the law creating the Fund (proposal already submitted to the Legislative Assembly) in order to

provide FOMAV with its own resources for financing maintenance works, by means of a selective excise tax on fuels (equivalent to US\$0.10 per gallon); (ii) allocate a portion of the resources from current fuel taxes to FOMAV; and (iii) establish a fund based on the differential between domestic and international fuel prices, part of which will be used to finance highway maintenance. The allocation of permanent resources for highway maintenance by FOMAV will be a condition for contracting out to carry out the investment and maintenance activities of the second stage of the project (paragraphs 2.11 and 3.9 to 3.11).

**Special
contractual
conditions:**

- a. **Special conditions precedent to the first disbursement of stage one:** (i) signing of agreement for the transfer and allocation of resources, and execution of maintenance activities under the project (paragraph 3.1); and (ii) signing of a maintenance agreement, acceptable to the Bank, covering the maintainable portions of the country's road system in 2004 (paragraph 3.4).
- b. **Special conditions precedent to the first disbursement of stage two:** presentation of (i) evidence of the budgetary allocation and transfer in 2004 of the resources required by the MTI and FOMAV for execution of the project; and evidence that the activities of stage one have been carried out according to the schedule agreed to in advance with the Bank; (ii) evidence that a permanent, appropriate, and independent financial scheme considered acceptable by the Bank has been created and entered into force for guaranteed allocation of resources to FOMAV, enabling the latter to meet its obligation to provide routine and periodic maintenance work on the country's maintainable highways; and (iii) evidence that FOMAV has received actual transfers of resources for fulfillment of at least four months worth of routine and periodic maintenance activities on the country's maintainable network, pursuant to the aforementioned new financial scheme.
- c. **Special contractual requirements for execution of the project:** (i) semiannual meetings will be held to monitor the project (paragraph 3.8); (ii) the final evaluation of the project will be performed (paragraph 3.13); and (iii) the bidding documents will include the environmental and social specifications set out in the summary of the social and environmental analysis (information in the files—Execution) (paragraph 3.25).

Poverty-targeting and social sector classification:

This operation qualifies as a social equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704). This operation also qualifies as a poverty-targeted investment (PTI). The borrower will not be using the 10 percentage points in additional financing (paragraph 4.15).

Exceptions to Bank policy:

None.

Procurement:

The contracting of works, procurement of goods and related services, and hiring of consulting services will be carried out in accordance with the Bank's policies and procedures, by means of international competitive bidding when the value of works is equal to or greater than US\$3 million; the value of goods is equal to or greater than US\$300,000; or the value of consulting services exceeds US\$200,000. For the contracting of works and the purchase of goods and related services in amounts below these thresholds, the bidding rules set out in national legislation will be followed provided they are consistent with the Bank's procurement policies and procedures. In the case of procurements made using cofinancing provided by the NDF, the borrower will apply the procurement rules and procedures of that development agency.

I. FRAME OF REFERENCE

A. Socioeconomic context

- 1.1 At the end of the 1970s and throughout the 1980s, Nicaragua experienced civil war, hyperinflation, and the collapse of production, exports and earnings. With the 1990s the country began the task of economic reconstruction under a democracy and, beginning in 1994, it resumed economic growth and began gradually to reduce widespread poverty (over half the population had fallen below the poverty line by 1993). Since then, Nicaragua has pursued market economic and trade liberalization policies, while at the same time concentrating its efforts on maintaining macroeconomic stability, coping with the effects of Hurricane Mitch and meeting the conditions for reducing its debts under the HIPC Initiative. Despite these efforts, much remains to be done in order to improve the fiscal and current account situation, increase production capacity and productivity, gain market access on a competitive basis, integrate with neighboring economies, and improve the quality of life of the population.
- 1.2 Open trade and integration are creating added pressure—today more than ever—for productive agents to become competitive, and for other new agents to be incorporated into the production process. The trade negotiations in which Nicaragua is participating, including those leading to the signing of the Central American Free Trade Agreement (CAFTA), are intensifying the country's commitments to integration, competitiveness, sustainable and equitable growth and, hence, to the alleviation of poverty under the Strengthened Economic Growth and Poverty Reduction Strategy, and the Millennium Development Goals. Several factors will have to come together for achievement of these objectives: both macroeconomic and microeconomic elements, some in the public and others in the private sector, and some of which are directly involved in the productive sector while others form part of the infrastructure needed to support production. The policies and measures that determine the quality of a country's transport services and infrastructure lie at the root of its economic growth and social prosperity.
- 1.3 Lack of transportation infrastructure, offering levels of service and interconnectivity compatible with market access and the achievement of a region's economic growth potential within the shortest possible time, is one of the most important obstacles for Nicaragua to overcome. The reduction of transport costs in an economy based essentially on primary production, with generally low value/volume ratios, is crucial to competitiveness, investment and employment within a zone. But it is not enough to invest in improving the service conditions of the highway system. This step must be followed by measures to ensure that roads remain in good condition and it is here that Nicaragua has repeatedly failed to carry out activities and allocate resources in a timely way for publicly funded maintenance programs of its highways.

- 1.4 One of the objectives of the Puebla-Panama Plan (PPP) is to take advantage of the human and ecological riches of the Mesoamerican region within a framework of sustainable development. To do this, the PPP has adopted a strategy that not only supports Central American integration, but also strengthens efforts in that direction by including south-southeastern Mexico as part of the Mesoamerican region. This strategy consists of eight initiatives¹ with their respective projects. The objective of the Mesoamerican Transport Integration Initiative is to increase internal and external interconnectivity among the region's economies by upgrading highways in the main integration corridors, harmonizing the region's transport laws and regulations, optimizing highway freight transport services and ensuring their integration with marine and air transport services (including seaport and airport systems), thereby reducing transportation costs and making the region more competitive by overcoming its infrastructure limitations and improving access to markets—all of this in an environmentally friendly and socially sustainable manner.
- 1.5 Based on the work of the Initiative's Technical Commission² and with the support and assistance of the IDB, a memorandum of understanding was drawn up concerning the International Mesoamerican Road Network (RICAM), which establishes a common legal, institutional, regulatory and operational framework for executing the Initiative, including identification of the Mesoamerican highway corridors that make up the RICAM network. This memorandum was signed by the Ministers of Transport and Public Works, and the Presidential Commissioners of the PPP in June 2002, and includes: (i) layout of the highest priority Mesoamerican integration corridors, based on needed infrastructure and fiscal realities; (ii) general rules and prioritized action plans for sustainable development of the network; (iii) principles to be applied in harmonizing transport regulations and technical standards; and (iv) guidelines on highway maintenance, disaster abatement and participation by civil society.
- 1.6 The highways making up RICAM total 9,034 km in length, including 4,904 km forming the area's principal integration corridors and a further 4,130 km in branch roads and additional regional connections. The portion of RICAM in Nicaragua totals 691 km, of which 342 km are part of the Pacific Corridor, while the remaining 349 km consist of complementary branch roads and connections. The

¹ Sustainable Development, Human Development, Prevention and Mitigation of Natural Disasters, Promotion of Tourism, Commercial Exchange, Road Integration, Energy Integration, and Integration of Telecommunication Services.

² In order to coordinate the necessary activities to promote and execute the PPP's Transport Integration Initiative, the Ministers responsible for the transport and public works sector created the Initiative's Technical Commission made up of government officials appointed by their respective ministries. This Commission is supported by the Bank, the Central American Bank for Economic Integration (CABEI), the Andean Development Corporation (CAF), and the Secretariat for Central American Economic Integration (SIECA).

Government of Nicaragua has given improvement of the RICAM corridors in that country top priority, some of which have received financing (paragraph 1.9).

B. The sector

- 1.7 Motor vehicle transportation is the predominant means of moving persons and goods in Nicaragua. The country's road system is comprised of 18,712 km of highways and rural roads. Only 1,986 km (10.6% of the total) are paved, and the majority of these have already exceeded the service life for which they were designed and built. Roughly 13,780 km (73.6%) are dirt roads in rural areas, built to low specifications and of limited use during the rainy season. The rest (2,946 km) are surfaced with mainly gravel and, in a small number of cases (139 km in all), concrete paving blocks.
- 1.8 Acting through MTI—the public agency responsible for investment in its highway system—Nicaragua has concentrated on major highways in recent years, including the Pan American highway, as well as on those roads that have a direct impact on production or social concerns. But the objectives of its projects in this area, together with those carried out under bilateral grants and soft loans from multilateral organizations, have not sought to capture the synergies available through integration of highway networks and regional complementarity among various investment activities.
- 1.9 The Pan American Highway runs from El Guasaule (Honduran border) to Peñas Blancas (Costa Rican border) and is part of the Pacific Corridor created under the PPP. This corridor, which is 3,159 km in length and extends from Puebla (Mexico) to Panama City, is the most effective integration corridor in the Mesoamerican region in view of its length, topography and altitude, and investment needs. The stretch in Nicaragua between El Guasaule and Chinandega is one of the areas of greatest priority and urgently in need of improvement. Contracts have been let for the works with financing from Mexico via CABEL, and work is currently in the initial stage of execution. The stretch that links Puerto Corinto (on the Pacific) with the Pan American Highway at Chinandega is one of the branch roads and regional connections included under RICAM, and the Telica-San Isidro stretch (which offers an alternative to the Chinandega-El Guasaule highway) has been added to RICAM at Nicaragua's request.
- 1.10 As with any highway system, it is not enough to achieve infrastructure service conditions consistent with demand on principal corridors; it is also necessary that the road network relevant to economic and social development and integration be both functional and efficient. Nicaragua, like all the countries that are part of the PPP, recognizes the need to complement the efforts being made to improve the Pacific and Atlantic Corridors by also seeking to upgrade the branch roads and regional connecting routes (paragraph 1.9), and the highways and arterial roads of

the national and zonal systems. As discussed below, this project is designed to do just that.

- 1.11 In response to various highway maintenance problems encountered by the MTI, two IDB operations (loans 1036/SF-NI and 1088/SF-NI) and one International Development Association (IDA) project (loan 3464/CR-NI) have provided resources for both institutional support for the creation and operation of FOMAV, and the financing of maintenance activities.
- 1.12 As a result of these efforts, Nicaragua created FOMAV in the second half of 2002 under Law 355 of 1 August 2002, as a legal entity operating under its own budget, of perpetual duration and with technical and administrative autonomy, whose primary mandate is to ensure that proper maintenance is carried out on the country's maintainable highway system.
- 1.13 While providing for its establishment, FOMAV's organic law did not grant the Fund a permanent and sustainable source of funding of its own that would permit it to carry out this mandate. Consequently, FOMAV has been able to operate on a partial basis only carrying out some of its responsibilities using the proceeds of the loans from the Bank and the IDA, along with resources allocated under the federal budget for its operation.
- 1.14 In addition, implementation of FOMAV's organizational structure and startup of its operations were delayed by complications surrounding the enactment of regulations governing the Fund, which did not come into effect until May 2003 when they were approved by the Legislative Assembly after being held up by the Executive Branch for some time. Only then was FOMAV able to begin awarding the first contracts for use of the resources provided by the Bank and the IDA for highway maintenance.

C. The country's strategy in the sector

- 1.15 Nicaragua's strategy is to improve the country's highway infrastructure and promote integration to help producers gain access to markets and foster economic growth. This strategy has been determined at the highest level of government and includes actions to: (a) strengthen public institutions in the sector; (b) speed up the use of resources available under loans and grants (\$142 million) currently in execution; and (c) prepare and present the Highway Program to Promote Competitiveness (HPPC) to the international financial community as a means of helping to integrate the country's highway infrastructure services under the relevant networks for improved competitiveness at the zonal and national levels, and incorporating Nicaragua's corridors into RICAM and its feeder roads.

1. The Highway Program to Promote Competitiveness (HPPC)

- 1.16 In discussions between the public and private sectors, Nicaragua has identified four zones of the country as having the greatest potential for improving productivity, increasing production of competitive goods and services, and creating new jobs in the least amount of time. These are considered areas in which public investment in infrastructure can have the greatest impact, particularly investment in integrated highway systems that provide greater interconnectivity and access, better quality of freight and passenger services, and lower production and marketing costs. The National Transport Plan (PNT), developed in 1999 with financing from the Bank, has confirmed that these zones should have the highest priority for investments in transport. Following this approach and bearing in mind the priority placed on RICAM under the PPP, Nicaragua drew up a program for the period 2004-2006 which it presented to the Consultative Group on 26-27 October 2003. This program seeks to speed up execution of existing commitments, finance and execute new investments in highway infrastructure services to improve competitiveness and attract private sector investors, ensure coordination among the various agencies supplying bilateral and multilateral financial support, and promote integration.

2. Financing of the HPPC

- 1.17 Highway maintenance activities in the past have been limited to having the government respond directly to emergencies through its public civil works companies, while ignoring the need for preventive or routine maintenance. Steps have been taken recently to correct this situation, including the creation of FOMAV to provide autonomous administration of contracts for routine and periodic maintenance work on the highway system, although dependent for its financing on government appropriations via the budget and funding provided by the Bank and the IDA for this purpose. However, these resources are insufficient and continuing support is required to underpin the borrower's efforts to find the necessary funds and enable FOMAV to perform its duties effectively. To this end, government, MTI, and FOMAV authorities are taking the necessary steps to amend the law creating the Fund in order to supply that entity with its own resources for the financing of maintenance activities, using one or more of the following means: (i) impose a selective excise tax on fuels (equivalent today to US\$0.10 per gallon of fuel sold and US\$18 million per year) to be earmarked for FOMAV, which measure has already been presented to the Legislative Assembly; (ii) allocate a part of the proceeds from the current motor vehicle fuel tax to FOMAV; and (iii) establish a highway maintenance fund based on the differential between (higher) domestic and (lower) international fuel prices.
- 1.18 The HPPC calls for the identification of high-priority areas in which development of local road networks, regardless of their current or projected characteristics, will help to encourage overall economic development and in specific sectors, as well as promote domestic and foreign investment. The concept that defines the HPPC was

presented to the Bank and IDA, the Danish Agency for Development Assistance (DANIDA) and the Nordic Development Fund (NDF) in April 2003, all of which indicated their agreement in principle and the high likelihood of their support. The HPPC thus designed and developed will be divided into separate projects by zone, one of which is the subject of this loan proposal, making it easier to coordinate financing from bilateral, multilateral and local sources. After studying the conceptual framework and objectives of the project, the NDF offered to cofinance its activities with a contribution of €12 million. The government accepted this cofinancing and adjusted the scope of the operation to match the project to the availability of concessional resources from the NDF and the Bank.

- 1.19 The four zones covered by the HPPC were chosen on the basis of their high production potential and provision of competitive services; the presence of relevant and specific highway networks requiring upgrading and adequate maintenance to facilitate efficient movement of inputs, factors of production, and goods and services produced; and the marketing of such goods and services in both domestic and export markets. These four zones are as follows:

Zone I: to the west of Lake Nicaragua, consisting of the departments of Rivas, Masaya, Carazo, Granada, and part of Managua, with good potential for tourism and agriculture;

Zone II: the northwestern region of the country, with good potential for the production of shrimp, peanuts, fish products, agroindustry and tourism development. This area includes the department of Chinandega and the connection to Puerto Corinto, which is given priority under the PPP;

Zone III: to the north of Lake Managua, with good potential for mining, tourism and agriculture. This area includes the departments of León and Matagalpa, and the Telica-San Isidro highway which is included among the PPP's priorities;

Zone IV: to the northeast, east and southeast of Lake Nicaragua where the project will have an impact on the potential of the area's dairy and agricultural industries, and create a new interconnection with Costa Rica (and Puerto Limón), which is also given high priority under the PPP. This area comprises the departments of Río San Juan, Boaco and Chontales.

- 1.20 The HPPC embraces a number of basic strategies: (i) identify the integrated highway network in each of the selected zones that is relevant to development in a context that eliminates inadequate highway infrastructure as an obstacle to competitiveness and investment within a relatively short period (three years); (ii) link the capacity to provide effective maintenance for the network in each of the four zones to investment capacity in highway rehabilitation and improvement projects; (iii) ensure coordination and systematic monitoring of available foreign financing; and (iv) help with the identification, financing and execution of

additional public investments from other sectors. Nicaragua hopes that the success achieved in financing and executing the HPPC will lead to preparation and funding of a second, similar program in other zones, to be carried out over the following three-year period (2007-2009).

- 1.21 The operation proposed herein will fund part of the HPPC including, if warranted, another similar operation that would be approved at the end of 2004 for other regions of the country. In principle, IDA, Japan and CABI will also contribute to the financing of the HPPC. The components and structuring of the new financing will be finalized following presentation to the Consultative Group (completed) and consideration by the different participating agencies. The amount of the new external financing has been estimated, in principle, as US\$200 million, including the US\$40 million from the Bank for this operation and the €12 million from the NDF.
- 1.22 Nicaragua and its highway sector have received significant financial assistance from the international community. However, with few exceptions, one of which was the rapid response to the emergency caused by Hurricane Mitch, successive governments since the end of the civil war have negotiated financing for investments in specific projects that are not always coordinated. And the introduction of reforms to increase the country's institutional capacity for managing highway maintenance programs have led more to finding common ground than coordinating efforts. The HPPC seeks to reverse this trend; integrate highway networks that will foster increases in productivity, investment and production; ensure that this road system is well maintained; and, where applicable, contribute to regional integration, market access and lower transportation costs.
- 1.23 The different sources of funding will help by financing and supervising the HPPC jointly and completely. In the past even where different sources funded specific stretches under the same highway project, each agency provided its own supervision which was limited to only those components directly financed by it, with a similar lack of coordination regarding contractual requirements. While the financing of the operation covered herein is for this specific project, this will not imply segmentation in the execution and evaluation of the HPPC. To this end, the project intends to strengthen the Dirección General de Vialidad [Highway Directorate] (DGV) and provide it with an integrated management system covering all of the projects, coordinating activities both horizontally and vertically, and providing a reliable source of constantly updated information that can be used to generate reports for various levels of government and sources of project financing. The Bank has expedited its agreement with the MTI and FOMAV, and its proposal to establish periodic coordination meetings with the different sources of financing for the HPPC.
- 1.24 Road maintenance and investment in integrated highway systems can be an even more effective means of promoting competitiveness, private investment and

production in each zone if, in the process of executing the HPPC (including this project), needs arising in other sectors are likewise addressed. The fact that the Minister of Transport is also responsible for coordination of the part of the Cabinet that deals with infrastructure will no doubt facilitate coordination and synergy for financing and addressing additional infrastructure needs, for example in rural energy, water supply and sanitation. Equally important is the willingness of the various bilateral and multilateral funding agencies participating in the HPPC to give favorable consideration to new financing requests identified in the process of carrying out the program.

D. The Bank's strategy and experience in the sector

1. Comparative figures

- 1.25 Nicaragua has the largest land mass yet is also the least densely populated country in Central America, with the bulk of its 5.2 million inhabitants concentrated along the Pacific coast and in its central highlands. This distribution, plus the fact that it has the lowest per capita income among Central American countries, helps to explain why Nicaragua has one of the lowest road densities, and—especially if one excludes the Pan American Highway—some of the poorest quality highways in the region. Table I-1 below presents indicators that show how Nicaragua compares with other Central American countries. The limited size and quality of access results in high transportation costs, both in terms of motor vehicle operating expenses and the added costs associated with excessive travel time, losses due to damage to inputs and products, and higher inventory and storage costs. For an economy such as Nicaragua's which remains predominantly agricultural, general transportation expenses are crucial to competitiveness and decision-making with respect to investments.

Table I-1
Selected Comparative Indicators

Indicator	C. Rica	El Salvador	Guatemala	Honduras	Nicaragua
Land mass (10 ³ km ²)	51.1	21.0	109.0	112.1	130.0
Population 2001 (10 ⁶)	3.9	6.4	12.0	6.6	5.2
GDP 2001 (10 ⁶ US\$)	16.1	13.7	20.5	6.4	
Gini coefficient ³	45.9	50.8	59.9	59.0	32.6
Productivity of farm labor (1995 US\$/worker)	5,272	1,710	2,115	990	N.A
Vehicles/10 ³ inhabitants	133	61	57	62	10
Vehicles/km	14	36	45	28	8
Current account bal. 2002	-5.4	-4.5	-5.3	-8.4	-28.2

³ Information from 1998, except for Guatemala (2000) and Nicaragua (1994).

Indicator	C. Rica	El Salvador	Guatemala	Honduras	Nicaragua
Agricultural exports/total 2001 (%)	35	36	55	68	85
ICRG (Dec. 2002) ⁴	73.5	71.8	67.0	63.5	53.8
Highway system (10 ³ km)	35.9	10.0	14.1	13.6	19.0
Paved/total roads (%)	22	20	35	20	11
Road density (km/km ²)	0.70	0.48	0.13	0.12	0.15
Service index (km paved/10 ³ of population)	2.0	0.3	0.4	0.4	0.4

Source: World Development Indicators 2003, World Bank.

2. The Bank's experience with investment in the sector

- 1.26 Among operations financed by the Bank in this sector is the rural road rehabilitation and upgrading program (756/OC-NI and 902/SF-NI), whose six-year execution period was completed in 1999 and included 17 gravel roads for a total length of 372 km, at a cost of US\$64.2 million (US\$47 million in loans). In 1999, loan 1036/SF-NI was approved which—with the help of additional external cofinancing—paid for the rehabilitation of six sections (a total of 259 km) of the Pan American Highway. Four of these sections (totaling 207 km) were completed in 2003 with resources from that loan, which also provided funding for strengthening the institutional capacity of the MTI and supporting the creation of FOMAV. The original cofinancing arrangement fell through and Nicaragua has had to seek resources from other external sources. Rehabilitation of one of the remaining sections (a 22.5-km stretch between Tipitapa and Las Flores) has begun thanks to a loan of US\$5 million from the OPEC Fund for International Development, but rehabilitation of the 29.5-km section between Nandaime and Las Flores still needs to be financed and executed. In 2001, loan 1088/SF-NI was approved for US\$35 million to rehabilitate an 88-km stretch of the Managua-Rama highway under an operation currently in progress.
- 1.27 The Bank's experience with the MTI as executing agency of project components has been generally good, except in the area of maintenance. After becoming eligible for disbursements, the projects in question have been carried out with the requisite technical quality and according to applicable social and environmental requirements, and generally within the planned deadlines and cost projections. The Executing Unit for IDB projects has acquired suitable experience and its technical personnel have for the most part managed to avoid the turnover that often occurs when a new government takes office—and even sometimes within the same administration—or when a new minister is appointed. Based on the project completion reports and the experience of members of the Project Team and the

⁴ International Country Risk Guide: 0-100, based on 22 risk components associated with investment climate.

Bank's Country Office in Nicaragua, there are three main lessons to be learned. These have to do with cofinancing, coordination and highway maintenance.

- 1.28 With regard to cofinancing, experience has shown that there is a need to ensure its availability prior to or at the same time as the Bank approves the respective loan. As explained above (paragraph 1.25), the Pan American highway rehabilitation project consisted of six highway sections, four to be financed and completed with resources from loan 1036/SF-NI, and two that were to be carried out with cofinancing resources which were offered, but never materialized. To date, replacement financing has been found for one of the two remaining sections and work is scheduled to begin on that stretch of highway shortly. Meanwhile, Nicaragua is continuing to seek financing for the other section.
- 1.29 Problems affecting coordination are several and diverse. Considering that work on Nicaraguan roads has been financed primarily with foreign resources, however, experience has shown that these problems come down to two main factors needed to improve coordination in the highway sector, both among donors and lending institutions and within the MTI. Coordination among foreign agencies has been effective in helping Nicaragua to cope with the effects of natural disasters, such as the aftermath of Hurricane Mitch. In other cases, each donor or lending agency has tended to offer resources based on its own perception of priorities (paragraphs 1.21 and 1.22). The HPPC and its integration into the PND seek to ensure more effective coordination. With the MTI, the requirements set by each source of foreign financing have contributed to the creation of a number of executing units, each working in isolation (paragraph 1.22) and with only a tenuous relationship to the chain of command and personnel, the procurement, accounting, cost-control, information and other specific, special and separate systems.

3. The Bank's experience with maintenance

- 1.30 The major weakness in Nicaragua's road sector continues to be lack of resources for maintenance of the network. Since the sector receives foreign assistance for capital investment but not for current expenses, Nicaragua allows the road system to deteriorate rapidly and then, from time to time, obtains new financing in order to rebuild damaged portions of the system. However, the country has made great strides recently, many with the help of the Bank, creating the Highway Maintenance Fund (FOMAV) as the agency responsible for administering maintenance contracts beginning in 2003, while reducing the six Regional Construction Enterprises created in 1988 as public sector agencies to carry out construction and maintenance works on force account and under the jurisdiction of the MTI. But FOMAV cannot carry out its lawful duties in the absence of resources. Loan 1088/SF-NI, which is currently being executed, includes a detailed and sound plan of action for FOMAV, with both physical and financial targets, numerous and broad organizational and institutional requirements (which have been met), and a US\$2 million seed fund to assist the startup of its operations. The latter

resources represent the only source of financing planned for FOMAV (a similar seed fund financed by the IDA has not received the approval of this institution for its utilization) so that this plan of action has of course not been carried out.

4. Strategy

- 1.31 The proposed project is consistent with the Bank's framework strategies, as well as its approved strategy with Nicaragua (document GN-2230-1) currently in force. The strategy on sustainable economic growth (document GN-2227) calls for the Bank to place priority on improving the institutional and economic environment for development of production activities in the private sector, and notes that one contribution it can make in this area is to facilitate access to key productive resources, including transport services and infrastructure. The competitiveness strategy (document GN-2243) reaffirms that lack of access to adequate infrastructure remains an obstacle to development of production activities and business growth, and confirms that one of the Bank's priorities must be the provision and administration of coordinated infrastructure services.
- 1.32 The Bank's operational priorities in the area of integration, as defined in the regional integration strategy (document GN-2245), recognize the importance of supporting infrastructure development not only for national purposes but also in order to facilitate regional integration. It is for this reason that this strategy attaches priority to the activities of the PPP, both to execute coordinated investments in infrastructure and harmonize policies and measures to facilitate provision of logistical and transport services, including at transshipment centers and border crossings.
- 1.33 The Bank's strategy with Nicaragua (document GN-2230-1) stresses economic growth and focuses on boosting competitiveness and production as the primary objective and essential prerequisite for reducing poverty. This strategy also underscores the importance of improving basic infrastructure maintenance, providing other services, seeking areas of common interest and creating new synergies through coordination of efforts among bilateral and multilateral institutions.

E. The experience of other financing agencies

- 1.34 The MTI is successfully carrying out investment programs financed with its own resources and those provided by foreign sources. With the Bank's support and that of other development agencies, the Ministry has been able to rehabilitate a large portion of the Pan American Highway together with some of the country's arterial and secondary road system. Efforts in this area by other providers of development support include: partial rehabilitation of the Nature Corridor (IDA); rehabilitation of highways in the Yalagüina-Las Manos sector that complement the connection to Honduras's portion of the Pan American highway (Government of Sweden); and

rehabilitation of several collector roads (CABEI, DANIDA, the Government of Venezuela, the Government of Italy, and the European Union). The Governments of Japan and Taipei China have financed construction of several bridges on main highways; and the Governments of the United States, Spain and other donors have supplied equipment and labor for rehabilitation of market access roads.

- 1.35 The lack of resources for carrying out preventive routine and periodic maintenance is, in the opinion of all providers of development support, the main problem in the highway sector, so the Bank, IDA and the other agencies contributed to the creation of FOMAV. It is clear to them, however, that without a permanent source of funding, this institution cannot let contracts for the maintenance work as the law requires. The response has been varied, with some agencies (e.g. the IDA) deciding not to finance work on unpaved roads, and to support efforts by the MTI to recruit microenterprises for the cleaning of culverts and clearing of ditches and rights of way, as well as allocating US\$2 million to FOMAV as seed money. The Bank's approach (loan 1088-SF-NI) included a maintenance plan with physical targets each year for the period 2001-2005, a "seed fund" of US\$2 million, and provision for a gradual increase in maintenance activities contracted out (under FOMAV administration), along with the simultaneous phasing out of maintenance work being provided on force account by the MTI—assuming that the government would allocate the necessary resources.

F. Financial status of the highway sector

- 1.36 The budget of the MTI includes appropriations for the entire road system, with the exception of the urban road network. Total financial resources allocated to the interurban road sector in the period 1999-2003 was just over US\$434 million as shown in Table I-2, resulting in an average annual budget of close to US\$87 million. This average even includes certain nonrecurring expenses incurred in 1999 to continue restoring roads damaged by Hurricane Mitch and expand the rehabilitation and maintenance programs carried out with the support of the Bank and the IDA. In all, 59% of these funds came from external sources, with the Bank supplying 31% of the total and the rest provided by the IDA, CABEI, DANIDA, Sweden, Japan and the Venezuelan Investment Fund. Contributions from the national budget rose significantly during 1999-2003, in part to meet emergency requirements, to an average of US\$36 million per year over that period.
- 1.37 Table I-2 also presents an estimate of the highway sector's projected expenditures and funding for the period 2004-2006. These projections incorporate the targets set out under the National Development Plan (PND), including the HPPC and the present project. The estimates shown mean that average annual spending on the highway system will rise from the above-mentioned US\$87 million in 1999-2003, to US\$142 million over the period 2004-2006. This level of expenditure is higher than the amounts executed in the last two years, and includes the level of expenditures required under the HPPC, expected to average US\$65 million per year

between 2004 and 2006. This level of investment and resource contributions under the national budget are consistent with projected public spending under the foreign debt relief provided by the Heavily Indebted Poor Countries (HIPC) initiative.

Table I-2
Highway Sector's Expenditures and Funding
(US\$ millions)

	Total 99-03	2004	2005	2006
Rehabilitation and maintenance	229.2	56.9	90.0	26.6
Construction			41.5	128.2
Maintenance	82.7	5.4	22.4	30.5
Restoration of highways	47.1			
Studies and other	75.1	4.6	10.2	11.7
Total Expenditures	434.1	66.9	164.1	197.0
IDB	80.3	10.8	34.8	15.4
IDA	88.3	12.1	16.7	25.0
OTHERS	85.7	22.6	85.2	123.7
Subtotal external funding	254.3	45.5	136.7	164.1
GOVERNMENT	179.6	20.9	23.0	25.9
FOMAV	0.2	0.5	4.4	7.0
Subtotal internal funding	179.8	21.4	27.4	32.9
Total from all sources	434.1	66.9	164.1	197.0

Source: Planning Division, MTI

G. Strategic framework of the project

- 1.38 The project covers all of Zone II and a portion of the adjacent area in Zone III (paragraph 1.19), i.e. it includes upgrading and maintenance work on the highway network relevant to economic and social development in the Department of Chinandega, plus part of the relevant network in the Department of León, both of which are located in northwestern Nicaragua. The project area was chosen in principle because of its competitive potential in agriculture, aquaculture, agroindustry (especially for exportation), and tourism. Peanut and shrimp production stand out, as well as the beauty of its landscape and natural surroundings, which are particularly well-suited to ecotourism, including the volcano Cosigüina, the *farallones* headlands, the Estero Real tidelands on the Golfo de Fonseca, and the beaches.
- 1.39 Peanuts are today Nicaragua's third most important export product and its most valuable crop (US\$1,800/ha), with production located primarily in the volcanic soil of the Cosigüina peninsula which is also suited to the production of watermelon and pumpkin, among others. Peanut yields (4 tons/ha) are higher here than those of the world's major producers (the United States, with yields of 3 tons/ha, and Argentina

at 1.8 tons/ha), and opportunities exist for significantly increasing exports of peanuts in bulk or processed form (peanut oil and butter).

- 1.40 Under the recent CAFTA agreement, Nicaragua went from zero to an initial quota of 10,000 tons for the United States market, and 20,000 tons beginning in the fifteenth year from the signing of the agreement. The project area currently exports some US\$25 million per year of shrimp and is still recovering from Hurricane Mitch. Due to poor road conditions, delivery to processing plants around Chinandega and León is expensive in terms of transport costs and product losses alike. Aquaculture and fisheries provide the country's second most important exports and CAFTA calls for fishery products to enter the United States market free of tariffs and quotas.
- 1.41 Other factors as well contributed to the selection of the project area. One of these resulted from the preliminary meetings with other potential sources of financing which allowed the Bank to assess their interest in other zones and highway networks. Another factor was the Bank's willingness to process the loan operation in 2003, and the knowledge that the main highway improvements to the relevant network targeted under the project were already covered by preinvestment, environmental and engineering studies financed by the Bank in the past. The CABEI financing for the highway between Chinandega and El Guasaule, which connects with the Honduran highway system and provides access to Puerto Cortés, was another factor given its importance to the project area and Nicaragua's international trade. And lastly, the project area has very few relevant roadways currently classified as maintainable.

II. THE PROJECT

A. Strategy

- 2.1 The government's National Development Plan (PND) has determined that a major part of public investment will be directed at providing highway systems for areas with the greatest development potential, in order to facilitate connections within each zone along with interconnections between zones and with seaports, airports and border crossings. The choice of zones and upgrading priorities for specified highways and roads are determined by the economic activity in the various population centers and major markets, in the context of the free trade agreements currently being negotiated. The PND emphasizes the components of preinvestment and investment studies under the HPPC and, in particular, reconstruction of the Chinandega-El Guasale highway. As noted earlier (paragraph 1.9), the latter is being financed by CABI and is deemed of strategic importance under the PPP and to Nicaragua, given its cross-border access, and investments under the project. At the same time, this strategy contributes to regional integration under the PPP by enhancing the operation and interconnectivity of highway systems and promoting economic and social development at the zonal and national level.

B. Objectives and description

- 2.2 The overall objective of the project is to provide infrastructure services to upgrade the capacity, quality and interconnectivity of the highway network in the country's northwestern region, thereby promoting competitiveness and attracting investments in the region which includes Zone II and part of Zone III under the HPPC (hereafter the project area), and which is one of the areas with the greatest potential for social and economic development. A degree of access consistent with the project area's potential, better connection to domestic markets, ports and border crossings, and effective maintenance of the project highway system will not only promote greater competitiveness and private investment, but also boost the production of goods and services and spur employment.
- 2.3 The work done to define and integrate the highway upgrading and maintenance activities for the project area served as a practical guide for the other three areas. Each area will include: (i) routine and periodic maintenance activities, with localized improvements to be carried out under the latter category; (ii) upgrading of infrastructure; (iii) preinvestment studies including engineering, social impact and environmental studies, assessment and reduction of vulnerability to natural and man-made disasters; and (iv) technical and institutional support for the MTI and FOMAV, with emphasis on technical supervision, monitoring and evaluation of the project and the HPPC, plus consolidation and expansion of improvements in both institutions.

- 2.4 The project area has less than 80 km of roadway that is maintainable through routine activities—out of a total of around 560 km of highways and roads that have been identified as relevant to development. Most highways or roads relevant to development are in an advanced state of disrepair due to lack of timely maintenance, and many of them have no remaining useful life. The project will include the following activities to be carried out on the relevant roads and highways: (i) improvement and rehabilitation of paved highways (approximately 90 km); (ii) upgrading and resurfacing of dirt and originally surfaced roads (approximately 70 km); (iii) periodic maintenance with localized improvements to paved and surfaced highways (approximately 292 km); and (iv) routine maintenance of maintainable roads.

1. Type of operation and cost categories

- 2.5 Given its general characteristics, the project requires financing under NDF and Bank investment loans. The cost categories involved are defined as follows: (i) highway investments; (ii) periodic and routine maintenance; (iii) costs for mitigation of environmental and social risks; (iv) services for the supervision of investments and maintenance activities; (v) technical assistance for the institutional strengthening for the MTI and FOMAV, in particular for the Highway Directorate (DGV); (vi) services to carry out preinvestment studies; (vii) financial costs and inspection and supervision associated with the respective loans; and (viii) unallocated resources to cover contingencies. The components to be financed under the project are broken down according to source and presented in the paragraphs below.

2. Components financed by the NDF

- 2.6 Resources from the NDF loan will be used to finance 100% of the costs—except taxes—for the following: (i) reconstruction and improvement of 3.5 km of paved highway between Chinandega and El Viejo; (ii) reinforcement and upgrading of the paved highway between Chinandega and Puerto Corinto, including construction of the new Paso Caballos bridge; and (iii) financial costs for commitment fee and services rate charged by NDF.

3. Components financed by the Bank

- 2.7 The proceeds of the Bank's Loan will be used to finance 100%—less taxes—of the following: (i) reconstruction and improvement of 25 km of highway between Telica and Malpaisillo; (ii) reconstruction of a 38.5-km stretch of paved highway between El Viejo and El Congo; (iii) paving of the 15.2 km section between El Congo and Empalme Cosigüina; 28 km between El Viejo, Tonalá and Puerto Morazán; and 25.8 km between Cuatro Esquinas, Tempisquiapa and Marota; (iv) periodic maintenance and upgrading to gravel surface of the 25.6-km stretch between Empalme Cosigüina and Punta Nãta; the 10.3-km section between El Congo and

Puerto Castilla; the 19.1-km section from Empalme Cosigüina to Potosí; the 12.0-km stretch between Empalme Jiquilillo and Padre Ramos; the 8.6-km section between Ranchería and Tonalá; the 14.3-km section between Ranchería, Campuzano and El Bonete; the 9.5-km section between Hato Grande and Cayanlipe; the 25.3-km stretch connecting Somotillo, Rodeo Grande and Valle Los Quesos; the 10.1-km section from Cinco Pinos to San Pedro del Norte; the 26-km between El Escudo, the Mayocunda junction, and Las Garzas; the 29.6-km stretch between Somotillo and Cinco Pinos; the 20.5-km stretch between El Marimbero and Llanos Las Marías; the 11.4-km section connecting Empalme Villanueva, Villanueva and Las Pilas; the 36.9-km running from Villa 15 de Julio through the Las Marías to Mina El Limón junctions; and the 33.6-km section between Malpaisillo and La Paz Centro; (v) consulting services to conduct studies in support of execution of the HPPC and its extension through the period 2007-2009, and technical assistance to MTI and FOMAV for coordination, control, follow-up and evaluation of the execution of both the HPPC and the project; and (vi) financial expenses and inspection and supervision fees charges by the Bank.

4. Components financed with local counterpart resources

- 2.8 Local counterpart funding will be used to pay taxes—assessed at 16.15% of the project's total expenditures—funds that the government will recoup upon payment of same, and routine maintenance on the entire relevant system currently classified as maintainable, which will gradually expand as the investments in that system are completed. Moreover, in 2004 FOMAV will draw upon resources from the funds earmarked for this purpose under loans from the IDA and the Bank to conduct routine maintenance on the relevant network classified as maintainable, i.e. the segments of the system running between Chinandega and Telica (72 km) and between La Paz Centro and Izapa (8 km).

C. Costs and financing

- 2.9 The project will cost a total of US\$65.5 million, and is divided into the following components:

Table II-1
Costs and Financing Plan
(US\$ millions)

Category	IDB	NDF	GNI	Total
1. Engineering and administration	4.4		0.8	5.2
1.1 Preinvestment studies	1.3		0.2	1.5
1.2 Supervision , auditing and evaluation	3.1		0.6	3.7

Category	IDB	NDF	GNI	Total
2. Direct costs	32.9	12.0	10.4	55.3
2.1 Investments	29.1	11.8	6.3	47.2
2.2 Periodic maintenance	2.0		0.2	2.2
2.3 Environmental and social mitigation	0.8	0.2	0.2	1.2
2.4 Routine maintenance			3.6	3.6
2.5 Institutional strengthening	1.0		0.1	1.1
3. Unallocated costs	1.5	1.4	0.7	3.6
3.1 Contingencies	1.5	1.4	0.7	3.6
4. Financial costs	1.2	0.2		1.4
4.1 Interest	0.6			0.6
4.2 Credit fee	0.2	0.1		0.3
4.3 Inspection and supervision	0.4	0.1		0.5
Project total	40.0	13.6	11.9	65.5

2.10 During preparation of the project, the Bank worked in coordination with the authorities of the Nicaraguan government and the NDF to arrange the proposed cofinancing (parallel cofinancing), up to the sum of €12 million (estimated for purposes of the project costs as the equivalent of US\$13.6 million), for the funding of the categories set out in Table II-1 above. This loan proposal will form part of the documentation that the NDF will use for approval of its cofinancing. The Nicaraguan authorities and the NDF will sign a financing agreement in early 2004, preferably either prior to or simultaneously with signature of the Bank's loan contract. The government, the NDF and the Bank are hoping that the Legislative Assembly will ratify both loan operations at the same time, if possible. The Bank will then sign a memorandum of understanding with the NDF for the execution of the proposed resources.

2.11 The activities of the project have been grouped under two stages to be carried out consecutively (paragraphs 3.9 to 3.11), such that eligible disbursements under the Bank's loan for the second stage of the project will be directly dependent on effective allocation to FOMAV of the permanent resources needed to meet its highway maintenance obligations specified by law. An additional eligibility requirement for disbursements under the Bank's loan during stage two of the project is that the parties—Bank and executing agency—must confirm that the allocation and transfer of budgetary resources have been adequate for ensuring proper and timely execution of stage one, in accordance with the program (paragraph 3.10). Table II-2 below shows the distribution of costs per stage and source of financing.

Table II-2 Costs and Financing Plan for each Stage (US\$millions)				
STAGE I				
Category	IDB	NDF	GNI	Total
1. Engineering and administration	1.3		0.3	1.6
1.1 Supervision	1.3		0.3	1.6
2. Direct Costs	15.1	11.6	5.5	32.2
2.1 Investments	14.2	11.4	4.9	30.5
2.2 Periodic maintenance				
2.3 Environmental and social mitigation	0.2	0.2	0.1	0.5
2.4 Routine maintenance			0.4	0.4
2.5 Institutional strengthening	0.7		0.1	0.8
3. Unallocated costs	1.8	1.8	0.6	3.2
3.1 Contingencies	1.8	1.8	0.6	3.2
4. Financing costs	0.9	0.2		1.1
4.1 Interest	0.3			0.3
4.2 Credit fee	0.2	0.1		0.3
4.3 Inspection and supervision	0.4	0.1		0.5
Subtotal stage one	18.1	13.6	6.4	38.1
STAGE II				
1. Engineering and administration	3.1		0.5	3.6
1.1 Preinvestment studies	1.3		0.2	1.5
1.2 Supervision, auditing and evaluation	1.8		0.3	2.1
2. Direct costs	17.8		5.6	23.4
2.1 Investments	14.9		2.1	17.0
2.2 Periodic maintenance	2.0		0.2	2.2
2.3 Environmental and social mitigation	0.6		0.1	0.7
2.4 Routine maintenance			3.2	3.2
2.5 Institutional strengthening	0.3			0.3
3. Unallocated costs	0.7		0.3	1.0
3.1 Contingencies	1.7		0.3	1.0
4. Financing costs	0.3			0.3
4.1 Interest	0.3			0.3
Subtotal stage two	21.9		6.4	28.3

III. EXECUTION OF THE PROJECT

A. Borrower and executing agency

- 3.1 The borrower will be the Republic of Nicaragua, and the executing agency for the project will be the Ministry of Transport and Infrastructure (MTI), with the participation of FOMAV for highway maintenance activities planned under the project. For purposes of the transfer of resources to FOMAV for maintenance activities, to provide effective coordination of activities with the MTI and meet execution obligations, an agreement that must be acceptable to the Bank will be signed by the MTI and FOMAV as a condition precedent to the first disbursement of stage one of the loan. The MTI will be responsible for consolidating the information related to the project, submitting requests for disbursement to the Bank, and carrying out the other administration activities of the project. The MTI will act through its DGV.

B. Execution and administration

- 3.2 For HPPC coordination purposes, the DGV will act as the MTI's unit responsible for coordinating all the projects to be financed under the HPPC by the different external funding agencies, including this project. The overall function of the DGV is to propose, plan, construct, contract out, supervise, maintain and improve the highways and bridges making up Nicaragua's road system. At present the DGV consists of three divisions and two executing units: the Highway Construction Division, which contains the executing units responsible for projects financed by CABEL, DANIDA and additional sources other than IDA and the Bank; the Highway Maintenance Division; and the Highway Administration Division, plus separate executing units for the IDA and the Bank.
- 3.3 As soon as the amounts and sources of financing, and the implementation schedules for the rest of the HPPC are finalized, the DGV—as the department of the directorate of the MTI responsible for executing this project—will prepare a detailed project execution plan including the necessary adjustments to its organizational structure, the support to be provided by the various units of the MTI and FOMAV, and the specialized consulting services needed for effective and on-time execution of the activities. Accordingly, the project will provide financing for specific institutional strengthening activities in FOMAV and the MTI, the DGV, the Environment Section and the Procurement Section. Reinforcement will be provided by specialized consultants in addition to those performing project activities, hired for their expertise in the administration of technical, social and environmental studies; the reduction of vulnerability to natural disasters; improvement and sustainability of databases and tools for planning, monitoring and evaluation of road serviceability in highway networks, and its impact on zonal development; oversight and administration of highway works and maintenance

contracts; and the drafting of periodic and regular progress reports for distribution to all financing agencies participating in the HPPC.

- 3.4 FOMAV will be responsible for contracting with private sector businesses to carry out the maintenance activities specified in the project. The MTI and FOMAV are in the process of signing a highway maintenance agreement for 2004 that must be acceptable to the Bank, which includes the sections covered by the project, and for which FOMAV will be the agency responsible in terms of funding and execution of periodic and routine maintenance. The signature of that highway maintenance agreement for 2004, and the specific inclusion in that agreement of both the relevant roads and highways, and the required financing, will be a condition precedent to the first disbursement of stage one of the loan.

C. Selection criteria for network investments and maintenance activities

- 3.5 As indicated earlier (paragraph 1.15), the regions and road networks covered by the Highway Program to Promote Competitiveness, including the project area and relevant highway system covered by this project, were selected on the basis of their potential for boosting production, productivity, investment and employment. The determining factors were the transport needs and priorities identified by producers of goods and services, in particular those identified by trade groups and associations, major marketers, and municipal authorities, and the priorities established under the PPP.
- 3.6 Once the required improvements were identified, the conditions and work needed on the rest of the road network were evaluated, including the routine and periodic maintenance necessary to ensure that the overall infrastructure of the project area achieves and maintains levels of access and service compatible with its competitive potential. Alternative technical solutions were immediately drawn up and tested using the HDM-IV simulation model. In each case the solution giving the highest net present value—at a discount rate of 12%—was included as part of the project.

D. Procurement of goods and services

- 3.7 The contracting of works, procurement of goods and related services, and hiring of consulting services will be carried out in accordance with the Bank's policies and procedures. International competitive bidding will be used for: (i) civil works, including contracts for maintenance activities, valued at US\$3,000,000 or above; (ii) procurement of goods valued at US\$300,000 or higher; and (iii) consulting services with a value in excess of US\$200,000.

E. Coordination of projects under the Highway Program to Promote Competitiveness

- 3.8 Authorities from Bank and other cofinancing agencies will meet in Managua or Washington D.C., or via teleconferencing, twice each year during the HPPC's

execution period. Based on the period needed to prepare the public sector budget, and the timing of the dry season when it is possible to make better progress on highway construction and maintenance works, it was agreed that these meetings would be held before 15 March and 15 September of each year beginning on 15 September 2004. The DGV will be responsible for preparing and distributing sufficiently far in advance (at least two weeks before each meeting) regular and standardized reports on the various components and projects carried out under the HPPC, including—but not limited to—details of bidding procedures; bar diagrams illustrating progress toward physical targets for the main activities under each highway and maintenance works project, and for comparison with the plans that are part of the respective contracts; physical, financial, and progress assessment indicators; rescheduling of physical works and financing, including justification and assessment of possible results; problems encountered and anticipated, and solutions adopted or proposed. In principle, the Bank and the NDF will be represented by the specialist in the Country Office responsible for the project, and one member of the project team from Headquarters.

F. Schedule, monitoring, auditing and evaluation

- 3.9 For the purposes of its activities, the project's components have been divided into two groups which are scheduled to be carried out in successive stages. The division into two stages is intended to allow execution of stage one to begin as soon as the conditions precedent to the first disbursement have been met, which conditions apply only to the components of the first stage of the project and, in any case, have been limited to permit rapid initiation of activities. Insofar as possible, this division of activities into two stages has taken into account the periods normally required for their execution, incorporating longer components into stage one. Of course this two-stage approach increases the project execution period, which would otherwise have lasted three years. Stage two is expected to be eligible for disbursements before the beginning of 2005, giving the government more than enough time to arrange permanent funding for FOMAV, enabling the Fund to fulfill highway maintenance activities as required by law, and to verify that the budgetary resources required for execution of stage one have been forthcoming, including the necessary local counterpart funding, and that the project is proceeding according to schedule.
- 3.10 In accordance with the criteria discussed above, stage one of the project will include: (i) highway investments to be financed by the NDF (paragraph 2.6); (ii) the following highway investments to be financed by the Bank (paragraph 2.7): upgrading of the riding surface including wearing course application on two highway sections, El Viejo-El Congo (38.3 km) and Telica-Malpaisillo (25 km); (iii) technical supervision of construction works; (iv) institutional strengthening; (v) financing costs (interest, credit fee and inspection and supervision); and (vi) contingencies.

- 3.11 The second stage of the project includes all the periodic maintenance activities and investments listed in paragraph 2.7, except those included in the first stage (paragraph 3.10), the preinvestment studies, supervision of the respective works, the gradually expanding routine and periodic maintenance activities involving the relevant network, auditing services and evaluation, and the institutional strengthening component associated with the procurement of equipment and design and implementation of a geographic information system. The first disbursement of the loan proceeds for this second stage is subject to the following requirements being met to the Bank's satisfaction that: (i) the local counterpart resources for execution of the project's stage one activities have been earmarked in the National Budget and have been transferred to the MTI and FOMAV in 2004, in accordance with the agreed upon schedule; (ii) FONAV's own financial scheme has been approved and entered into force, guaranteeing effective, ongoing, independent resources that are acceptable to the Bank for execution of routine and periodic preventive maintenance on the country's road network defined as maintainable; (iii) the resources for at least the first four months of maintenance activities have actually been transferred to FOMAV under the approved financial scheme; and (iv) the activities envisaged in the first stage of the project have been or are being executed, in accordance with the timetable agreed upon with the Bank.
- 3.12 In addition to the meetings mentioned earlier (paragraph 3.8), the Bank will provide regular supervision of the different components of the project through its Country Office in Nicaragua, including highway maintenance activities carried out with real local counterpart (financed via counterpart equivalent to taxes associated with the project). Joint and integrated supervision of the project will be provided by personnel from the IDB's Headquarters and Country Office, to coincide with the meeting to be held with other financial agencies supporting the HPPC by no later than 15 September 2005.
- 3.13 The borrower will hire consulting services to conduct a final evaluation of the project in accordance with terms of reference agreed to in advance with the Bank. This evaluation will be carried out three months prior to the date scheduled for the final disbursement of the loan, and will analyze, among other things, the degree to which the project's objectives and targets have been achieved, its contribution to the fulfillment of the HPPC's goals, and the prospective impact and effectiveness of the operation. Recommendations formulated in the course of regular supervision and as a result of the various reviews and evaluations carried out during and after execution of the project will be taken into account, where applicable, for purposes of adjusting methods of implementation and improving the conceptual design of new projects and programs.
- 3.14 The evaluation of outcomes based on the baseline figures established for the project (paragraph 3.27) will make it possible for two types of evaluation to be considered: an ex ante versus ex post comparative analysis of conditions in the project area, and an ex post analysis of the results achieved in the project region as compared with

conditions in areas not benefiting from the project's concentrated investment in improvement and maintenance of highway networks relevant to competitiveness, investment and employment. Carrying out both analyses would allow the government or the Bank's Evaluation Office to determine whether the indicators reflect improvements in the project area compared with their baseline figures (first analysis), and whether these improvements are in fact attributable to the project (second analysis).

- 3.15 The main questions guiding the evaluation process include: (i) whether the regions served by the upgraded and maintained road network show improved economic performance, and how much of this improvement is due to the project; (ii) whether and to what degree investment in upgrading and maintenance of highways has contributed to increased investment in the zone's productive sector; (iii) whether there has been an increase in social services (education, health) and assistance for the needs of persons living in the project area attributable to investments in and maintenance of the region's road system; (iv) whether new employment has been generated in the target areas, and the extent to which this is due to the project; (v) whether the level of highway maintenance has increased as a result of the incentives included in the project; and (vi) whether or not the producers and the general population consider that the level of service on the region's highway system has improved.
- 3.16 An external auditor will be hired to conduct an annual evaluation of how project funds were utilized, and to verify that the executing agency has adopted and is following the financial administration practices agreed to with the Bank and the NDF. Financial statements will be submitted by the executing agency within 120 days following the close of each fiscal year and during the project's execution period, duly audited by a firm of independent auditors acceptable to the Bank and in accordance with the relevant requirements established by the Bank. This auditing service will be financed with resources from the loan and will cover the financial statements on the project during its execution.

G. Ex post evaluation

- 3.17 In conformity with the Bank's policy (OP-305), and in consultation with the MTI and FOMAV, it was agreed that the executing agency would carry out an ex post evaluation as part of the project's activities, in particular for purposes of evaluating the new zonal highway network development system and the inclusion of maintenance activities to be carried out as a real counterpart contribution to the project. Based on the baseline studies currently being developed by consultants hired for this purpose (available in March 2004) and the other basic information used in the preparation of this project, it was agreed that the ex post evaluation would be carried out by the executing agency under its regular administrative budget, and would therefore not require financing through the NDF's or the Bank's loans. The monitoring and evaluation mechanisms, progress reports and semiannual

meetings will in turn provide the necessary information—that the MTI is required to keep on a regular and systematic basis—to assess the project’s impact and have the opportunity to extract lessons from the project. The methodology to be used for this purpose is described in the Summary on Measuring Project Effectiveness (information available in the technical files—Execution).

H. Public communications system

- 3.18 Using resources from the Bank’s nonreimbursable technical-cooperation operation (ATN/SF-8416 -NI), an international consultant was hired and has designed and begun implementing methods and means of communication that MTI/FOMAV can use to inform the communities and inhabitants in target areas of the project’s activities. Particular attention is being paid to announcing the activities to be carried out, including maintenance work and others specifically designed to mitigate any adverse social and environmental effects caused by the project. The public communications system takes into account the appropriateness of the various means available, and the degree of access that communities and individuals using the road system have to the different media. The system also includes campaigns to promote citizen participation in—and oversight of—the project at different stages: the first was completed during preparation for the project, while the others will be carried out in the course of its execution. Finally, the system will communicate via radio programs; the posting and updating of signs on each segment of the highway network indicating the work to be carried out; information in the local print media and on the Web pages of the MTI and PPP—plus the one to be created by FOMAV; and periodic meetings with beneficiaries and other interested parties.

I. Revolving fund

- 3.19 The project team recommends that a revolving fund be created for the project in an amount equivalent to up to 5% (five percent) of the Bank’s loan, bearing in mind the four-month scheduling of funding requirements owing to simultaneous execution of highway investment and maintenance activities. Meanwhile, the NDF will disburse the resources of its loan directly to the Nordic companies that will be carrying out the cofinanced activities under the project.

J. Disbursement schedule and period

- 3.20 The disbursement period will be at least three years and no longer than four and a half years, counted from the date of entry into force of the loan contract. Table III-1 below presents the estimated disbursement schedule, which is based on the assumption that all components of the project—stages one and two—become eligible for disbursements at virtually the same time, and that their execution begins in the second half of the year around August 2004 (paragraphs 2.11, 3.9 and 3.10).

Table III-1
Disbursement Schedule
(US\$ millions)

Source	Year 1	Year 2	Year 3	Total	%
IDB-FSO	13.9	21.0	5.1	40.0	61.1
NDF	4.5	7.9	1.2	13.6	20.7
Local Counterpart	3.5	5.2	3.2	11.9	18.2
Project total	21.9	34.1	9.5	65.5	100.0
%	33.4	52.1	14.5	100.0	

- 3.21 Inasmuch as it is impossible to predict the date on which stage two will become eligible, no disbursement schedule has been drawn up for that stage. But since the planning for each component in stage two is available and the corresponding contract procedures will have advanced as far as possible, only completing these procedures and incorporating them into the disbursement schedule when they do become eligible will remain to be done.

K. Environmental and social aspects

- 3.22 The investments in highway works to be carried out under this project do not entail major construction difficulties or require changes in the layout of roadways, which are located in stable zones. The overriding feature of the highways and roads included in the project is their lack of routine and periodic preventive maintenance and, on some routes, certain inadequacies in their original construction, particularly with regard to drainage. For these activities, the designs include technical specifications that meet the necessary standards for protection of the environment and not only achieve complete mitigation of direct effects, but also correct prior defects and ensure adequate management of indirect effects as well, where warranted. All of the investments in works, including localized improvements to roads receiving periodic maintenance, will be carried out on existing roadways and in areas already extensively developed. The aim in all cases is to restore and improve transportation capacity, the deterioration of which has adversely affected the competitiveness of the region's productive sectors and its ability to attract investment.
- 3.23 With the help of the nonreimbursable technical-cooperation operation (ATN/SF-8416-NI) it was possible to determine the social and environmental feasibility of the project. Part of this process included identification of some of the direct and indirect social and environmental effects of the project, specifically: (i) the direct impact and related effects of highway investments such as the accumulation of construction debris and garbage; the location and set up of work camps, stockpiling areas, crushing plants, and quarries; management of asphalt-mixing plants; damage and noise from the use of heavy equipment and machinery,

etc.; (ii) potential indirect impact on the project area in terms of economic activities associated with the relevant highway network, specifically agricultural operations and the agroindustrial and service activities. The Summary of the Social and Environmental Analysis (information available in the technical files-Execution) describes the methodological dimensions and resulting social and environmental recommendations.

- 3.24 To ensure the social and environmental feasibility of the project, a strategy has been adopted which includes steps to: (i) identify potential direct and indirect socio-environmental effects and analyze their characteristics; (ii) prepare an environmental and social management plan (ESMP) that includes adequate measures for control of direct adverse effects, including those caused by maintenance works, as well as measures to control indirect effects detrimental to the road network and region covered by the project; (iii) conduct environmental and social evaluations (ESEs) resulting in specific recommendations and budgets for each highway investment and maintenance activity to be carried out under the project; and (iv) provide institutional strengthening for the MTI and FOMAV with regard to the progress, coordination, integration and of environmental controls of preinvestment studies, and the supervision of highway investment and maintenance activities and of ESMP provisions included in each contractor's bidding conditions.
- 3.25 The measures taken to control adverse effects with direct environmental and social impact include: (i) review and definition of the project's general environmental technical standards and those specific to each investment and maintenance activity, and the specifications resulting from the ESAs which must be included in the contractual documents governing execution of construction and maintenance works, as well as the supervision of such works (contractors' bidding conditions); and (ii) approval and control of execution by the DGV, with support from the project consultants.
- 3.26 Although neither the current legislation, Nicaragua's environmental authority (MARENA), nor the Committee on Environment and Social Impact (CESI) required that environmental and social impact studies (ESISs) be carried out for the project, these assessments had already been conducted as part of the preinvestment studies. On 17-18 August 2003 the EIAs in question underwent public review in both Managua and the project area. A record of the consultation with inhabitants of the project area, local authorities, producers and users of the highway system was created and prepared. No unfavorable opinions whatever were voiced, nor was any mention made of possible negative adverse environmental and social effects. Based on this public review of existing ESISs, together with additional fieldwork and background studies conducted by consultants specifically hired for this purpose by the Bank, the necessary environmental measures and budgets to mitigate environmental and social effects of the project have been determined. With the help of these same consultants, a public information plan for promoting the project has been drawn up and the necessary environmental permits have been applied for. As a

condition precedent to the first disbursement, the environmental mitigation measures recommended with pertinent specifications in the Summary of the Social and Environmental Analysis (information available in the technical files-Execution) are to be included in the bidding conditions and pro forma contracts. And in order to guarantee the safety of workers, a provision is included which requires the use of protection equipment in accordance with the Occupational Health and Safety Regulations published by the Ministry of Labor.

- 3.27 The Environment Act, which came into force in 1996, establishes the legal and regulatory framework for handling environmental matters in Nicaragua. The Ministry of Environment and Natural Resources (MARENA) is the apex organization in environmental matters and its primary powers and responsibilities include the formulation of policies, supervision and monitoring of actions related to environmental protection measures, and the granting of environmental permits. The MTI, in turn, has developed and enforces and controls specific environmental and social regulations affecting studies and construction works which must be carried out in accordance with its Manual on Social and Environmental Management. This manual—the first of its kind in Central America—has a chapter on highway operations and maintenance which is applied by FOMAV in contracts let under its authority. Using the MTI/FOMAV's Manual on Social and Environmental Management as a guide, and with the support of the Permanent Secretariat of the General Treaty on Central American Economic Integration (SIECA), the Central American Manual of Environmental Standards for the Design, Construction and Maintenance of Highways was completed and is being applied in Nicaragua to regional components including highway projects under the PPP.
- 3.28 A quality control procedure based on principles of sustainability was established for the environmental measures to be applied in carrying out highway investment and maintenance activities under this project, including: (i) ESISs conducted in conjunction with consulting contracts for preinvestment studies financed primarily by the Bank; (ii) completion and standardization of ESISs, performance of ESEs, and preparation of the ESMP by a specialized consultant financed by nonreimbursable technical-cooperation resources from the Bank; (iii) environmental permit granted by MARENA for highway investment and maintenance activities; and (iv) direct cooperation with MARENA activities aimed at managing indirect social and environmental effects (Summary of the Social and Environmental Analysis, information available in the technical files—Execution); and (v) technical supervision of the mitigation measures carried out under the project, to be contracted out and overseen by the DGV, the MTI's Environmental Section and the Technical Division of FOMAV.
- 3.29 During preparation of the operation, the project team evaluated environmental aspects of earlier operations and the institutional capacity of the MTI and FOMAV on environmental matters. This evaluation enabled the team to identify areas that need strengthening and determine the scope of the respective component. In order

to ensure adequate environmental management and supervision and in accordance with the provisions of the Environment Act, the project will provide for integration and coordination of environmental management activities with those of the preinvestment studies and the execution of highway investments and maintenance works. At the same time the DGV, with the active and continuous support of FOMAV's Technical Director and assisted by the units and specialized personnel of the entire MTI and FOMAV, will review all contracts—whether for preinvestment studies, preparation of the ESMP, institutional strengthening, or highway investment and maintenance works—to ensure that their environmental and social components comply, in both form and substance, with the applicable legislation and standards.

- 3.30 In addition to the resources of the above-mentioned technical-cooperation operation (paragraph 3.23), the government has also allocated resources from an operation already in progress (loan 1088/SF-NI) for recruitment of a consultant to establish methods for evaluating results, gather the necessary socioeconomic data and identify baseline data against which to measure the effectiveness and impact of the project on production, productivity, investment and employment in the project area. The activities assigned to this consultant will take four months and are scheduled for completion in March 2004.

IV. FEASIBILITY AND RISKS

- 4.1 This project will continue the process begun with the latest two operations intended to upgrade Nicaragua's highway infrastructure, including one which is currently in progress. However, the present project differs from its predecessors in that it forms part of the Highway Program to Promote Competitiveness (HPPC), which seeks to concentrate its efforts on the four zones with the greatest potential for development (the project zone is one of these) and on the time it requires to solve the capacity, quality and sustainability problems in infrastructure services identified by the government and the production clusters and sectors. The project also differs from previous efforts in that it focuses on the overall needs of the network of roads identified as relevant to zonal development, including the need for upgrading, reconstruction and maintenance. Another distinctive feature of the project is the linking—as specific components in its cost structure—of investments in highway improvement projects to maintenance requirements for the relevant highway system. The country's highway infrastructure has not received consistent maintenance and the detrimental effects on infrastructure have accumulated. Even after establishing FOMAV, an agency whose sole responsibility is maintenance of the highway system, the needed work has not been done due to lack of funding.
- 4.2 The operation's technical, institutional, financial, economic, environmental and social feasibility has been established on the basis of the MTI's and FOMAV's contract administration capacity. The contract administration capacity of the MTI is based primarily on the work of its executing units for each source of financing. Working together, the MTI—through its Highway Directorate (DGV)—and FOMAV will ensure the coordinated action and efficiency required for the HPPC, including this project, and the support needed from other units and staff of both institutions.

A. Technical and institutional feasibility

- 4.3 The investment in highway works under this project will not involve major difficulties from a technical standpoint and there are interested companies, both local and foreign, with the capacity and experience to compete in competitive bidding processes for the relevant contracts, as has been the case for the past 10 years. The MTI has created executing units with the capacity to administer contracts according to the financing source. Through the DGV, the project will take advantage of that capacity to ensure coordination and efficiency in adjusting to the particular requirements of each source of financing. For the supervision of highway investment and maintenance activities, the DGV will be assisted by specialized consulting firms. With this in mind, and to ensure the institutional feasibility of the project and guarantee its extrapolation to the HPPC as a whole, the Bank's loan will finance modernization and reinforcement of the MTI's organizational structure, and provide resources for strengthening of FOMAV in order to achieve effective

execution of both this project and the HPPC, and to lay the foundations for sustainable highway infrastructure services in Nicaragua (paragraph 3.3).

- 4.4 The project requires that the MTI link together the various units and bodies carrying out highway works under the direct responsibility of the DGV, and that it create and preside over a Coordinating Committee made up of the directors or heads of the various executing units (IDB, IDA, CABEL, DANIDA, etc.). This coordination body in the short run does not eliminate the specific tasks of the special units established to execute loans and grants from foreign sources. Rather, it will promote closer coordination and efficient operations, particularly of the HPPC, including this project. To this end, the project will include resources for the design and implementation of an information and management decision-making system that will give the MTI access to detailed, precise and up-to-date information on the execution of highway investments and allow it to make efficient decisions. The project will also satisfy the need for additional resources to mount a consistent plan for strengthening the Environment Section—which currently receives insufficiently coordinated support from various sources, including a loan from the Bank currently under way (loan 1088/SF-NI)—as well as the need to strengthen the Procurement Section.
- 4.5 FOMAV has formulated an institutional strengthening plan for which it is receiving resources from various sources, including the current IDB loan mentioned above (paragraph 4.4). The project will supplement certain training and technical assistance activities, including adoption of performance contracts not yet executed, and help make FOMAV better able to administer maintenance activities (which is one component of this project) and to carry out all of its responsibilities with respect to the highway system mandated by law, as soon as a permanent source of funds is available.
- 4.6 Many of the highway sections slated for improvement, reconstruction and maintenance were built several years ago and have suffered excessive deterioration due to lack of preventive maintenance of any kind, whether routine or periodic. Most of the sections of highways and roads to be improved under the project are on level terrain, although a small number traverse rolling hills. All highways and roads are on basically stable ground with good horizontal geometric conditions and grades.
- 4.7 During preparation of the project, the MTI, with the aid of consultants, completed and updated alternative designs, including quantities of work and the respective costs, based on levels of service and comparable useful life of each section. This information, together with traffic figures, current and projected conditions and vehicle operating costs, among others was processed for each highway segment and proposed alternative using the HDM4 simulation model. Based on the indicators of economic viability resulting from the various runs of the model, the best engineering solutions were selected and the pertinent designs and costs adjusted

accordingly. In the case of highways between Chinandega and Puerto Corinto, and between Telica and Malpaisillo, the analysis took into account that these are not only of national interest, but also of regional interest given high priority under the PPP, and that their improvement must include the connecting sections defined and adopted by the eight countries of the region.

- 4.8 The project is expected to be executed over a 42-month period, with the stage one activities to begin in the second half of 2004. The execution period may be shortened if—in the ideal scenario—stage two overlaps with the first stage (paragraph 2.11), or begins prior to 2005. This will be made possible by having initiated the documentation and bidding procedures for all activities in the final quarter of 2003, under the supervision of the Bank's Country Office and the support of the project team, and by having arranged for the signing of the contracts as soon as the loans from the NDF and the Bank have been ratified by the Legislative Assembly and the conditions precedent to the first disbursement have been met. The engineering, economic and environmental studies for investments in the highway system have been completed. The parameters of periodic maintenance work were determined in field trips by personnel of the MTI, FOMAV and MARENA, and hired consultants to representative sections; and headings and quantities of work planned for systems for administration of paving, bridge and maintenance works were developed and validated with external support.

B. Financial feasibility

- 4.9 The project has the financing required for investing in all of the highway improvements and maintenance activities described. The addition of NDF funding makes it possible to incorporate all of the top priority investment and maintenance activities on the relevant roadways in Zone II and an adjacent portion of Zone III. The project investments are part of the recently published (September 2003) National Development Plan, and the Highway Program to Promote Competitiveness, which was presented to the Consultative Group in late October 2003. The project costs have been included in the financial projections presented in Table I-1, which are consistent with both the National Development Plan and the HPPC. These financial projections are based on a strategy of having all contracts for highway investments and periodic maintenance begin during the first quarter of 2004. Routine maintenance work on the maintainable network in the project area will also begin at the start of 2004, and will then be expanded beginning in 2005 as the highway investment and periodic maintenance activities are completed. In the final year of the project, maintenance work financed with local counterpart resources will be performed on the entire relevant highway network, a feature that is expected to ensure the sustainability of the preventive maintenance activities carried out by FOMAV. The extension of these project characteristics to the financing and execution of the entire HPPC will enable Nicaragua to more than double the length of its road system classified as maintainable, rising from the current total of 1,600 km to 3,500 km.

- 4.10 The external financing of the project, excluding the amount of taxes which the government will recover in any case, represents 88% of total costs. The remaining 12% of projects costs will be covered by the government's financial effort in the form of real counterpart funding of highway maintenance activities. Many producers in the project area, acting through trade groups, business clusters, large producers, and marketers, have indicated their willingness to help finance maintenance activities provided there are verifiable controls to ensure effective use of resources on segments of the road system vital to the region. FOMAV is planning to conclude agreements for this purpose, and the technical assistance will include efforts to encourage this development. However, the borrower will retain responsibility for ensuring the timely transfer of resources in amounts necessary for execution of the project, whether or not a part of this financing comes from private sector contributors.

C. Social and environmental feasibility

- 4.11 The activities to be carried out under this project are designed to reduce the adverse effects caused by lack of highway maintenance, and to improve and reconstruct highways and roads built many years ago without regard to direct and indirect effects. Accordingly, in preparing the project and drawing up its engineering designs, the environmental and social requirements resulting from a review of the ESIS, along with the mitigation measures recommended in the respective ESEs and the ESMP, have been incorporated. For this reason, the highway investment works and maintenance activities alike will either have a positive impact on the environment, or be carefully controlled to avoid any adverse effects. In addition, the community benefiting from the project's activities has been kept duly informed from the start, and will continue to receive pertinent, up-to-date information throughout the execution period in the form of reports from supervising consultants and the DGV in the project area, as well as having access to data posted on the Web pages of the MTI and FOMAV.
- 4.12 Contracts for highway investment and maintenance will include the environmental mitigation activities in their specifications and the respective costs, making contractors responsible for performance and compliance with these measures. The consultants supervising highway investment and maintenance contracts will ensure that their execution is closely monitored, including control of contract performance and quality assurance with respect to environmental requirements and standards, and the measures adopted for mitigation of indirect effects, in particular those designed for protection of parks and protected areas, cultural heritage sites, environmentally fragile zones and areas rich in natural resources. The implementation of environmental measures will also be monitored by the MTI with support from MARENA, as required by law.

D. Economic feasibility

- 4.13 The economic analysis of the project's highway investments was done taking into account, on the benefit side, savings in economic costs for the operation of motor vehicles and shortening of travel time achieved due to improvements and reconstruction of highway sections that, because of their advanced state of disrepair or inadequate capacity, provide a level of service which is incompatible with increased competitiveness, investment and transport safety. Various useful lifespans and levels of residual value were considered, according to the type of technical solution analyzed. In the area of economic costs, the analysis considered annual investment flows, routine maintenance, periodic maintenance and supervision. Engineering alternatives with the highest net present value (NPV) at a discount rate of 12% were chosen for financing under the project. Periodic and routine maintenance were not analyzed for economic rate of return since these are considered high-priority activities by definition. The results of the cost-benefit analysis of proposed investments under the project are presented in the following table.

Table IV-1
Estimated IRR, NPV and Sensitivity

Section	Length (km)	NPV (US\$ million)	IRR (%)	+20% Costs (%)
Chinandega-Puerto Corinto	21.0	26.4	82.1	73.2
Chinandega-El Viejo	3.5	7.4	83.6	72.8
El Viejo-El Congo	38.3	12.6	24.3	21.1
El Congo-Empalme Cosigüina	15.2	0.2	12.8	9.2
Empalme Cosigüina-Potosí	19.1	0.9	19.6	16.0
Empalme Cosigüina-Punta Nata	25.6	0.8	17.4	13.8
4 Esquinas -Tempisquiapa-Puerto Marota	25.8	3.8	25.9	21.9
El Viejo-Puerto Morazán	28.0	5.6	33.7	28.6
El Congo-Puerto Castilla	10.0	1.2	27.6	23.4
Telica-Malpaisillo	25.0	54.8	37.0	32.1

E. Poverty-targeting and equity classification

- 4.14 All projects that invest in Nicaragua, especially those whose benefits go to areas outside the urban capital of Managua, have a positive impact on the poor. If, in addition, the urban population is excluded and only those living in rural areas of Nicaragua are considered, then the threshold is even clearer since any amount invested in this sector is, by definition, a poverty-targeted investment (PTI). This is the classification applied to the program as a whole, as well as to the project addressed herein. Moreover, the specific objectives of upgrading service conditions

on the regions' highways as a means of increasing production, productivity, investment and employment mean that any operation intended to finance the HPPC—specifically, the Bank's operation which will finance a portion thereof, namely this project—will also be helping to raise labor productivity and thereby increase workers' wages, in addition to the temporary boost in employment on civil works, highway maintenance activities and related services. Hence the project will also have a positive impact on social equity.

- 4.15 Therefore, the operation qualifies as a Social Equity Enhancing (SEQ) project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704). This operation also qualifies as a poverty-targeted investment (PTI). The borrower will not be using the 10 percentage points in additional financing (Nicaragua qualifies for financing from the Bank of up to 90% of the costs for the project without this additional percentage).

F. Benefits and impact

- 4.16 By providing coordinated services on an integrated, improved and well maintained highway network designed to promote competitiveness and attract investment to the region, the project will produce immediate savings in the direct costs associated with the transporting of goods and people. The interconnectivity of the network relevant to zonal development, and the guarantee that the highways can be used year-round, including during the rainy season, are the key benefits to be achieved. Meanwhile, the linking of maintenance and highway investment works, and the concentration of investments in highways that are relevant to the project area's development, will preserve and prolong the lifespan of its infrastructure capital stock, eliminate lack of serviceable highways as an obstacle to competitiveness and investment, and facilitate identification of additional investments in other sectors of activity.
- 4.17 The coordinated participation of different sources of financing in a single program, the focus on an integrated highway system (rather than dealing with isolated sections) and, in the case of this project, the execution of maintenance activities as a counterpart to investments, are all factors that will unquestionably increase the effectiveness of the resources used. And this is the key objective, both of the government as set out in the PND, and of the Bank under its strategy with Nicaragua.
- 4.18 The main medium-term effects of the project are expected to include a rise in production and productivity, both in volume and value, plus an increase in investment followed by rising employment. In describing the baseline variables against which results are to be evaluated, the Summary on Measuring Project Effectiveness (information available in the technical files-Execution) lists other possible effects—or perceived effects—of the project including improved access to

public services, gains in general equity and the environment, and reduction of poverty.

G. Risks

- 4.19 The aspects that make this project special can be seen in the guiding principles adopted by the program of which it is a part. For the first time an operation to improve an integrated highway system has been developed by consensus between the government and the productive sector. For the first time in nonemergency circumstances, a project is being presented as part of a unique program with financing coordinated by the multilateral and donor community. And for the first time, maintenance activities have been integrated with investment in the project area's highway network. These innovative characteristics give rise to certain risks which are kept in check by the fact that the project was prepared in consultation with the productive sectors, local government and the communities in the various zones. This consultation mechanism will remain in force during execution of the project and, to the extent that the government is able to reach similar agreements with other financial sources, in other projects under the HPPC as well.
- 4.20 The project will also provide strengthened, effective and continuous coordination within the MTI through the DGV, in place of the fragmentation and compartmentalization seen with separate executing units for each source of external funding, and facilitate implementation of a common monitoring and evaluation system. The risks associated with this feature of the project will be kept under control by the fact that the DGV has wide experience in executing programs and projects for various sources and both bilateral and multilateral organizations and that, along with other key areas in the MTI and FOMAV, the DGV will be aided by various consulting services for supervision of the engineering, social and environmental aspects of the investment and maintenance components, and by technical assistance and institutional strengthening available to both the Ministry and the Fund.
- 4.21 A main risk lies outside the executing agency itself and has to do with allocation of the necessary budgetary resources for proper execution of the project. If these funds are not approved or, once approved, if they are not transferred according to the proposed implementation schedule, then it will not be possible to complete the project as scheduled. The project team has met with the Ministry of Finance and Public Credit, the Coordination and Strategy Secretariat under the Office of the President, and the International Monetary Fund's representative in Managua, all of whom have reaffirmed that, concessional resources are involved, they do not anticipate any problems with either the amount or the budgetary transfers to the project. The official request for funding of the project formulated by the Bank's Governor for Nicaragua points out that this project forms part of the proposal made to the Bank in 2003 by the President of the Republic, and as such, has the highest official priority of the Government of Nicaragua. The proforma budget for 2004

forwarded to the Legislative Assembly by the administration includes resources for initiating the project, and the Ministry of Finance and Public Credit has made the commitment to request an increase in these resources based on the funding needs of the project.

- 4.22 Another significant risk, also outside the executing agency's control, is one associated with the approval of the financial scheme for FOMAV that will guarantee the necessary resources to perform proper preventive maintenance on the country's network classified as maintainable (paragraph 3.11). Before the prospective loan was negotiated, the Executive Branch submitted a bill to the Legislative Assembly pursuant to which a source of specific resources would be established (equivalent to \$0.10 per gallon of fuel sold). The government expects legislative approval in the first quarter of 2004. If this measure were not approved, the Government of Nicaragua would propose another financial scheme to provide FOMAV with stable and permanent resources. The division of the project into two stages and the conditions for disbursement of the second stage are expected to serve as an incentive for the prompt approval of the new mechanism for obtaining resources for preventive routine and periodic road maintenance for the entire maintainable network.

**PUEBLA-PANAMA PLAN HIGHWAY PROJECT TO PROMOTE COMPETITIVENESS
LOGICAL FRAMEWORK**

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>Goal</p> <p>Increase competitiveness of the principal products in the northwestern region of the country (project area includes Zone II, Department of Chinandega, and adjacent portion of Zone III under the Highway Program to Promote Competitiveness (HPPC)) by improving highway infrastructure services</p>	<p>Increases in competitiveness are measured in the form of:</p> <ul style="list-style-type: none"> • Growth in the supply of products reaching the market, especially the export market; • Increase in productivity; • Reduction in the cost of inputs and production factors; and • Drop in marketing costs, due to fewer losses and lower packaging costs. <p>Increased investment:</p> <ul style="list-style-type: none"> • Increase in the level of investment in agriculture and fisheries; and • Increase in the level of investment in agroindustrial and non-agricultural activities. <p>Improvements in the perceived quality of rural services:</p> <ul style="list-style-type: none"> • Better access to social services; • Better transport conditions due to improvements and maintenance. <p>Improvements in employment levels in the project area:</p> <ul style="list-style-type: none"> • Increase in employment levels; • Higher wages for workers. 	<ul style="list-style-type: none"> • Production, trade, investment and employment reports from the Ministry of Agriculture (MAG) and the Ministry of Development, Industry and Trade (MIFIC). • Surveys in the World Bank's <i>World Business Environment Survey</i> of entrepreneurs in the zone. • Independent reports on the project financed under the technical assistance and useful for the HPPC. • Reports from trade groups and producer associations, clusters, and goods and services marketing companies. • Statistics and surveys on production, productivity, investment and employment in the zone. • Surveys showing what percentage of production and marketing costs is attributable to transport 	<ul style="list-style-type: none"> • Policies governing markets, integration and economic growth continue to be implemented; • No climate-related disasters occur that damage the project region and its connections with other regions and neighboring countries; • The HPPC is approved and carried out in the four zones that have been defined, one of which is that covered by the present project.

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>Purpose</p> <p>Provide better access, interconnection and transport conditions on those portions of the road network deemed essential for the project region's economic development</p>	<p>Upon completion of the project the following goals will have been met on the network (measured with respect to current levels):</p> <ul style="list-style-type: none"> • Reduction of operating and freight costs by 20-30%; • Reduction of aggregate travel time by 15-30%; • Increase in year-round access to the road network deemed vital for regional development, from 30% to 100%; • Maintainable portion of the network on which maintenance activities are being carried out rises from 80 km in 2004, to approximately 560 km by the end of the project. 	<ul style="list-style-type: none"> • Monitoring and evaluation reports on the HPPC and, specifically, on this project; • Estimates of volume of traffic, condition of paved roadway, and other pertinent information produced by the Pavement and Bridge Administrations (MTI), and the Highway Maintenance Administration (FOMAV); • Surveys of users (producer and marketing associations and representatives) and transport operators; • Comments on studies and data gathered from and offered by users, potential beneficiaries, interested parties and others in the private and public sectors alike. 	<ul style="list-style-type: none"> • Macroeconomic situation and conditions in the transport market remain satisfactory; • FOMAV develops its institutional capacity and has the necessary resources to provide periodic and routine maintenance on maintainable portions of the highway system during this project's execution period; • The MTI develops its institutional capacity and is allocated the necessary resources.
<p>Components</p> <p>Upgrading and maintenance works:</p> <ul style="list-style-type: none"> • Improvement and rehabilitation of paved highways in the Department of Chinandega and a portion of the Department of León (northwestern Nicaragua); • Improvement (with resurfacing) of dirt roads and resurfaced sections; • Periodic maintenance; and • Routine maintenance. 	<ul style="list-style-type: none"> • Improvements to 3.5 km of the Chinandega-El Viejo section; • Reconstruction of 38.5 km of the El Viejo-El Congo section; • Paving of 15.2 km of El Congo-Emp. Cosigüina, 28.0 km of El Viejo-Puerto Morazán and 25.8 km of Cuatro Esquinas-Marota sections; • Reinforcement of 21 km of Chinandega-Puerto Corinto section; 	<ul style="list-style-type: none"> • Monthly progress reports from consultants hired for supervision; • Regular reports on the HPPC; • Semiannual reports for lenders coordination meetings; • Operational auditing reports; • Project reports on the results and indicators achieved for segment and investment components completed, highway segments receiving maintenance, and the network relevant to development • Monitoring reports on the HPPC and the present project, including technical audits where applicable 	<ul style="list-style-type: none"> • The government maintains its commitment to execution of the HPPC after meetings with the Consultative Group; • Sufficient budgetary resources are budgeted and transferred in timely fashion for proper execution of the HPPC and this project; • The DGV is consolidated and strengthened. • Lenders' semiannual coordination meetings are carried out, and the actions agreed upon are taken. • Dialogue is maintained with private sector participants in the identification of zones and highway networks relevant to the HPPC.

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>Consulting services:</p> <ul style="list-style-type: none"> For preinvestment studies For technical assistance 	<ul style="list-style-type: none"> Maintenance and improvement works on: <ul style="list-style-type: none"> ⇒ 25.6 km, Emp. Cosigüina-Punta Nata; ⇒ 10.3 km, El Congo-Puerto Castilla; ⇒ 19.1 km, Emp. Cosigüina-Potosí; ⇒ 12 km, Emp. Jiquilillo-Padre Ramos; ⇒ 8.6 km, Ranchería-Tonalá; ⇒ 14.3 km, Ranchería-El Bonete; ⇒ 9.5 km, Hato Grande-Cayanlpe; ⇒ 25.3 km, Somotillo-Valle de los Quesos; ⇒ 10.1 km, Cinco Pinos-San Pedro del Norte; ⇒ 26 km, El Escudo-Las Garzas; ⇒ 29.6 km, Somotillo-Cinco Pinos; ⇒ 20.5 km, El Marimbero-Llano Las Marías; ⇒ 11.4 km, Emp. Villanueva-Las Pilas; ⇒ 36.9 km, Villa 15 de Julio-Emp. Mina El Limón; Social, environmental, economic and technical studies for a possible new program (2007-2009) based on lessons learned during execution of the HPPC and this project. Technical assistance for MTI and FOMAV to monitor and evaluate execution of the HPPC. 		

NARRATIVE SUMMARY	INDICATORS	MEANS OF VERIFICATION	ASSUMPTIONS
<p>Activities</p> <ul style="list-style-type: none"> • Selection and contracting of consultants for supervision; • Letting of works contracts; • Selection and contracting of consultants for consolidation and strengthening of the DGV; • Selection of consultants for training programs and strengthening of FOMAV; • Selection and contracting of operational auditors; • Selection and contracting for other technical assistance; • Selection and contracting of consultants to evaluate the project's impact on competitiveness, investment climate and employment in the zone. 	<ul style="list-style-type: none"> • Preparation of bidding conditions: the last quarter in 2003 and the first quarter of 2004; • Issuing of tender call: first quarter of 2004; • Awarding of contracts by July 2004; • Execution and supervision of contracts: beginning in the second half of 2004 and continuing for a period of three to four years. 	<ul style="list-style-type: none"> • Notices published; • Copies of contracts forwarded to and available in the Bank's Country Office; • Reports submitted by consultants hired for supervision; • Consolidated reports from the DGV; • Technical and financial audit reports; • Minutes of coordination meetings held by lenders 	<ul style="list-style-type: none"> • Engineering designs, economic, social and environmental studies, maintenance activities, costs and budgets are all adequate; • The required budgetary allocations are made according to schedule; • The government continues to attach priority to the execution of the HPPC and this project; • The government and beneficiary productive sectors maintain a dialogue and exchange information

NICARAGUA
PPP HIGHWAY PROJECT TO PROMOTE COMPETITIVENESS

PROCUREMENT AND TENDER SCHEDULE

	Amount (US\$ 000)	IDB %	NDF %	LOCAL %	Method	Prequali- fication	Date of publication of the SPN
Highway investments:							
Chinandega-Corinto	12,750		84	16	NCB	Yes	2003
Chinandega-El Viejo	1,550		84	16	NCB	Yes	2003
El Viejo-El Congo	9,395	84		16	ICB	Yes	2003
El Congo-Emp. Cosigüina	3,765	84		16	ICB	Yes	2003
El Viejo-Tonalá-Puerto Morazán	7,070	84		16	ICB	Yes	2003
El Congo-Puerto Castilla	735	84		16	ICB	Yes	2003
Emp. Cosigüina-Punta Nãta	1,840	84		16	ICB	Yes	2003
Cuatro Esquinas -Marota	2,860	84		16	ICB	Yes	2003
Emp. Cosigüina-Potosí	1,415	84		16	ICB	Yes	2003
Telica-Malpaisillo	7,665	84		16	ICB	Yes	2003
Periodic maintenance:							
Emp. Jiquilillo-Padre Ramos	130	84		16	LCB	Yes	N.A.
Ranchería-Tonalá	110	84		16	LCB	Yes	N.A.
Ranchería-Campuzano-El Bonete	165	84		16	LCB	Yes	N.A.
Hato Grande-Cayanlipe	110	84		16	LCB	Yes	N.A.
Somotillo-Rodeo Grande-Valle Los Quesos	225	84		16	LCB	Yes	N.A.
Cinco Pinos-San Pedro del Norte	125	84		16	LCB	Yes	N.A.
El Escudo-Emp. Mayocunda-Las Garzas	260	84		16	LCB	Yes	N.A.
Somotillo-Cinco Pinos	290	84		16	LCB	Yes	N.A.
El Marimbero-Llanos Las Marías	230	84		16	LCB	Yes	N.A.
Emp. Villanueva-Villanueva-Las Pilas	140	84		16	LCB	Yes	N.A.
Villa 15 de Julio-Emp. Las Marías - Emp. Mina El Limón	385	84		16	LCB	Yes	N.A.
Malpaisillo-La Paz Centro	275	84		16	LCB	Yes	N.A.
Routine maintenance:							
Relevant network (various contracts)	3,450			100	LCB		N.A.

	Amount (US\$ 000)	IDB %	NDF %	LOCAL %	Method	Prequali- fication	Date of publication of the SPN
Consultants:							
Preinvestment studies	1,500	84		16	¹	Yes	2003
Supervision, auditing and evaluation	3,700	84		16	¹	Yes	2003
Institutional strengthening	1,000	84		16	²	Yes	2003

ICB = International Competitive Bidding
LCB = Local Competitive Bidding
NCB = Nordic Competitive Bidding

¹ ICB or LCB depending on the estimated value of each contract

² The Bank's procedures according to the estimated value of contracts